

PB# 95-12

SCENIC TECHNOLOGIES

3-4-10.12

Approved 3-24-97

TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, NY 12550

GENERAL RECEIPT

Received of

Harris Production Services 100.00

One Hundred and 00 DOLLARS

For Planning Board App. Fee 95-12

DISTRIBUTION

FUND	CODE	AMOUNT
<u>Check 29025</u>		<u>100.00</u>

By Dorothy Hansen
Town Clerk

Title

© WILLIAMSON LAW BOOK CO., VICTOR, N.Y. 14564

Planning Board

Town Hall

555 Union Ave.

New Windsor, NY 12553

NO. 95-12

March 16, 1995

RECEIVED FROM Harris Production Services, Inc.

Seven Hundred Fifty 00/100 DOLLARS

Site Plan Minimum Escrow

Account Total \$ 750.00

Amount Paid \$ 750.00 CK# 29024

Minimal Money Sent to the P.B.

on Jones - Carbonless - 51622-4WCL Duplicate - 51644-4WCL Triplicate

Planning Board
Town Hall
555 Union Ave.
New Windsor, NY 12553

DATE 1-21-97

RECEIPT NUMBER 95-12

RECEIVED FROM Scenic Technologies - New York

Address 335 Temple Hill Rd. - New Windsor, N.Y.

One Thousand Eight Hundred Sixty-five 50/100 DOLLARS \$1,865.50

FOR Addition to Escrow P.B. # 95-12

ACCOUNT		HOW PAID	
BEGINNING BALANCE	<u>1865.50</u>	CASH	
AMOUNT PAID	<u>1865.50</u>	CHECK	

[Signature]

Duplicate - 51644-4WCL Triplicate

Board
Hall
555 Union Ave.
N.Y. 12553

DATE 1-21-97

RECEIPT NUMBER 95-12

RECEIVED FROM Scenic Technologies - New York

Address 335 Temple Hill Rd. - New Windsor, N.Y.

CHECK # 27828	100.00	By <u>Dorothy H. Hansen</u>
		<u>Town Clerk</u>
		Title

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NO. 95-12

March 16, 1995

Planning Board
Town Hall
555 Union Ave.
New Windsor, N.Y. 12553

RECEIVED FROM Harris Production Services, Inc.
Seven Hundred Fifty 00/100 DOLLARS
Site Plan Minimum Escrow

Account Total \$ 750.00
Amount Paid \$ 750.00 CK# 29024
By Myra Mason, Secy. to the P.B.

on Jones - Carbonless - S1642-4WCL Duplicate - S1644-4WCL Triplicate

Planning Board
Town Hall
555 Union Ave.
New Windsor, N.Y. 12553

DATE 1-21-97 RECEIPT NUMBER 95-12

RECEIVED FROM Scenic Technologies - New York

Address 335 Temple Hill Rd. - New Windsor, N.Y.

One Thousand Eight Hundred Sixty-five 50/100 DOLLARS \$1,865.50

FOR Addition to Escrow P.B. #95-12

ACCOUNT		HOW PAID	
BEGINNING BALANCE	1865.50	CASH	
AMOUNT PAID	1865.50	CHECK	

[Signature]

Wilson Jones - Carbonless - S1642-4WCL Duplicate - S1644-4WCL Triplicate

Planning Board
Town Hall
555 Union Ave.
New Windsor, N.Y. 12553

DATE 1-21-97 RECEIPT NUMBER 95-12

RECEIVED FROM Scenic Technologies - New York

Address 335 Temple Hill Rd. - New Windsor, N.Y.

Twelve Thousand Seven Hundred-two 56/100 DOLLARS \$12,702.56

FOR 2% of Cost Estimate (\$635,128.00) Inspection fee.

ACCOUNT		HOW PAID	
BEGINNING BALANCE	12,702.56	CASH	
AMOUNT PAID	12,702.56	CHECK	#27790
BALANCE DUE	-0-	MONEY ORDER	

[Signature]
BY Myra Mason, Secy.

TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, NY 12553

General Receipt

118004

Jan. 28, 1997

Received from Scenic Technologies \$ 100.00

One Hundred 00/100 DOLLARS

For P.B. #95-12

DISTRIBUTION:

FUND	CODE	AMOUNT
CK # 27828		100.00

By Dorothy H. Hansen
Town Clerk
TITLE

WILLIAMSON LAW BOOK CO., VICTOR, NY 14564

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer

11 Ashwood Terrace
Newburgh, NY 12550
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Fax (914) 565-1353

Finger Lakes Office
4779 East Lake Road
Geneva, NY 14456
(315) 585-9549

SITE DRAINAGE REPORT

FOR

BUILDING EXPANSION

AT

TEMPLE HILL ROAD
NEW WINDSOR, ORANGE COUNTY, NEW YORK

PREPARED FOR

ECTS - SCENIC TECHNOLOGIES, INC.



June 4, 1996
WCS NO. 95003

1.0 INTRODUCTION

ECTS - Scenic Technologies, Inc. plans to occupy the former Insulpane/Boss Glass site on Temple Hill Road, New Windsor, Orange County, New York. The 9.54 acre site has two existing buildings, 125,600 sf and 36,000 sf in size. A 10,400 sf portable building will be added as part of this development. Aside from the site for the portable building the main change from existing condition is the development of paved parking areas.

The existing site has an approved site plan with drainage shown, approval dated 6/11/86, prepared by Patrick Kennedy, L.S. This site plan does not reflect two 50 ft x 75 ft additions to the main building which were added without required approvals.

The purpose of this report is to evaluate the existing and developed drainage quantities for use in an ongoing area wide storm drainage study by others.

2.0 SOILS

The soils at the site as identified by the Soils Conservation Service are Erie A & B, a gravelly silt loam. For purposes of computing runoff the Erie soil has a hydrologic group rating of C.

The topography of the site consists basically of flat planes running north - south. The site is level east to west but rapidly drops approximately 11 ft. forming a second plane to the west. Drainage runs towards the northwest corner of the site.

3.0 STORM WATER ANALYSIS

Storm water runoff was computed using Haestad Methods version of the Soils Conservation Services' TR55 computer program. Runoff curve numbers and 24 hour rainfall data was taken from the Soils Conservation Services' "New York Guidelines for Urban Erosion and Sediment Control".

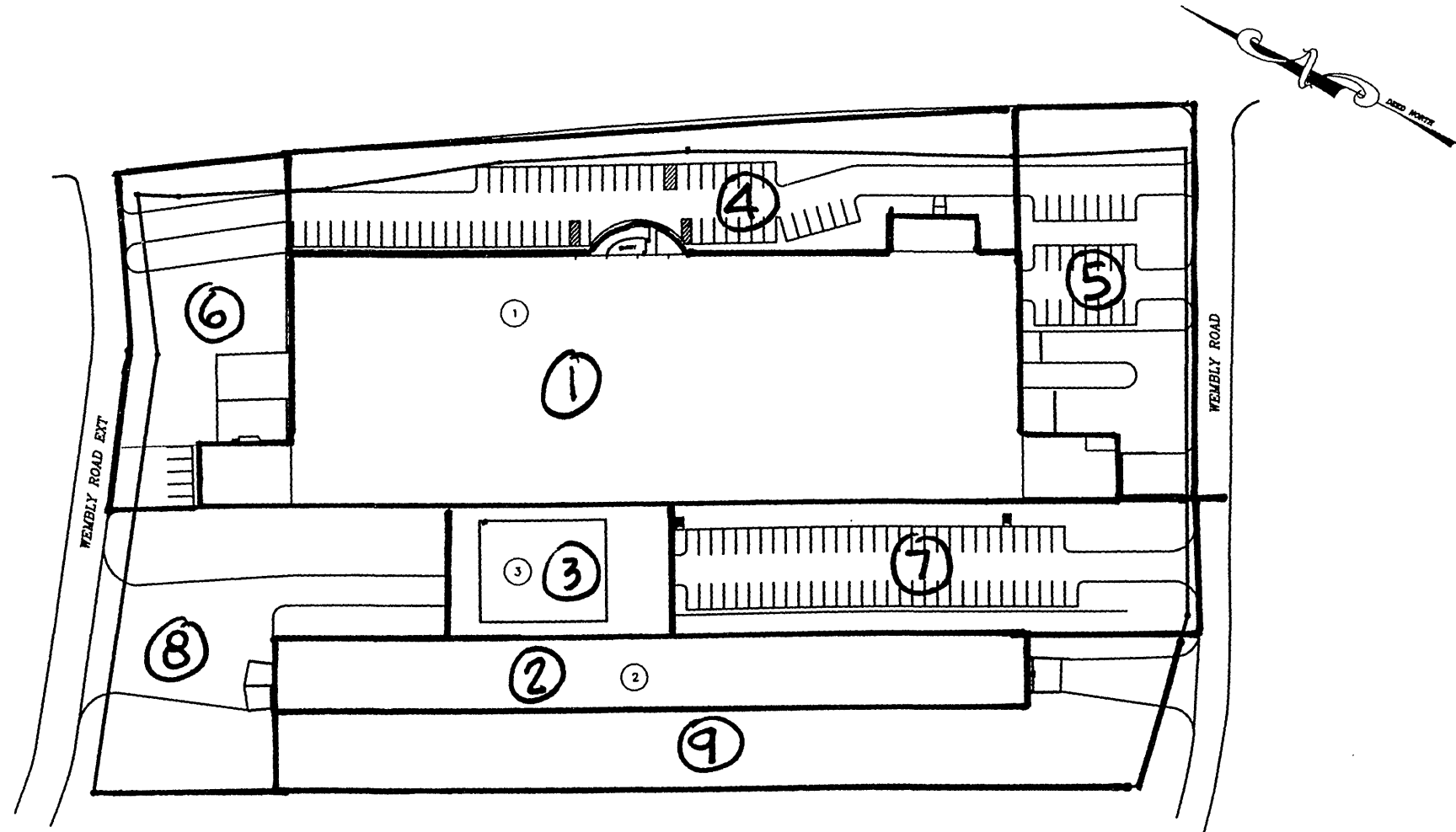
For both the existing and developed conditions storm hydrographs were created for 5, 10, 25, 50 and 100 year storms. The peak flows for these storms are shown below and the tabular and plotted hydrographs are included in the appendix.

PEAK FLOW TABLE

(values in cfs)

	<u>Existing Conditions</u>	<u>Developed Conditions</u>	<u>Change</u>
5 Year Storm	49	59	10
10 Year Storm	63	75	12
25 Year Storm	72	84	12
50 Year Storm	87	99	12
100 Year Storm	94	109	15

APPENDIX



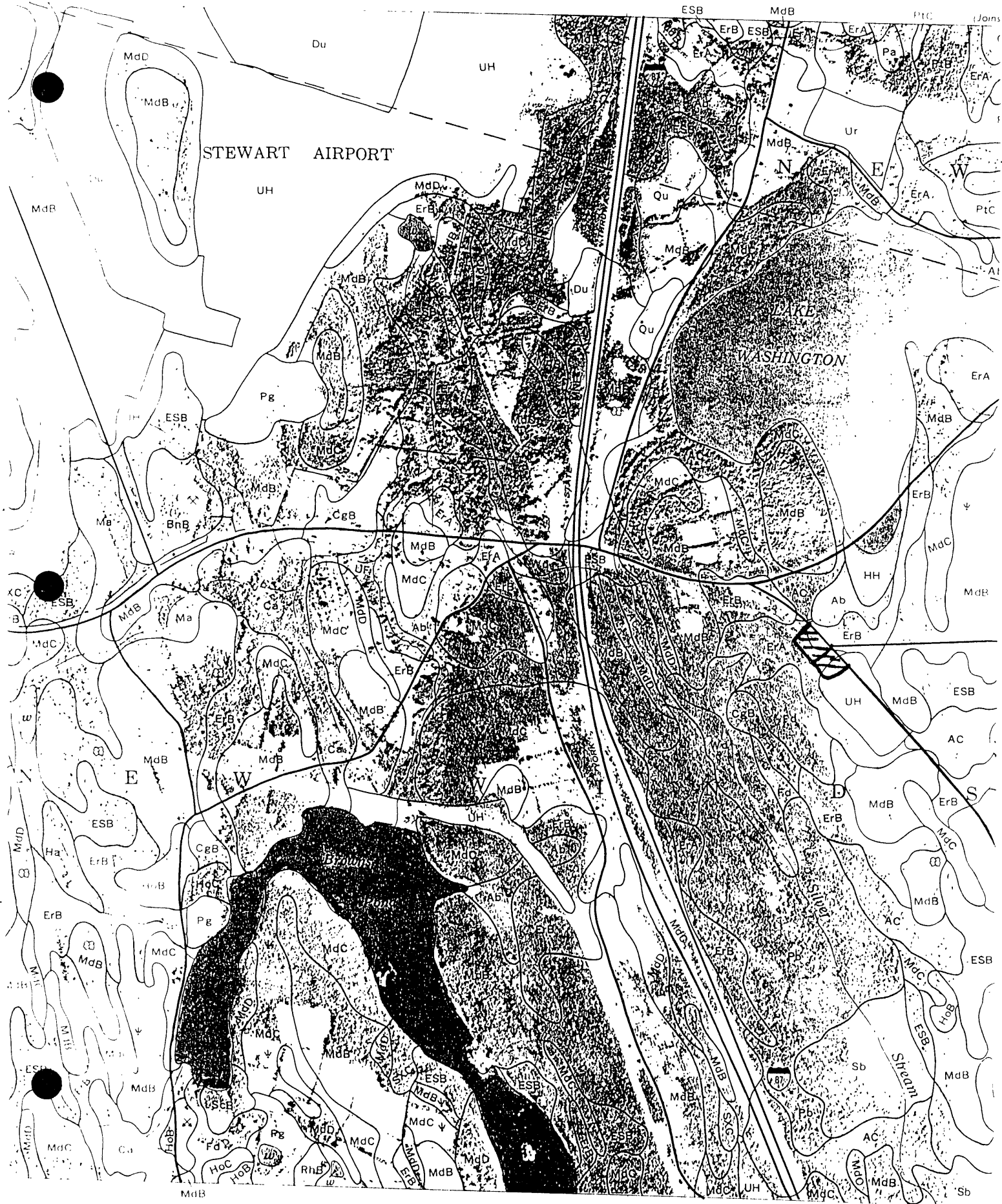


TABLE 17.--SOIL AND WATER FEATURES

The definitions of "flooding" and "water table" in the Glossary explain terms such as "rare," "brief," "apparent," and "perched." The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern]

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth Ft	Kind	Months	Depth In	Hardness		Uncoated steel	Concrete
Ab, AC*----- Alden	D	None-----	---	---	0-0.5	Perched	Nov-Jun	>60	---	High-----	High-----	Low.
AdA, AdB----- Allard	B	None-----	---	---	>6.0	---	---	>60	---	High-----	Low-----	Moderate.
ANC*, AND*, ANF*: Arnot-----	C/D	None-----	---	---	1.0-1.5	Perched	Apr-May	10-20	Hard	Moderate	Low-----	High.
Lordstown-----	C	None-----	---	---	>6.0	---	---	20-40	Hard	Moderate	Low-----	High.
Ba----- Barbour	B	Occasional	Brief to long.	Dec-Apr	3.0-6.0	Apparent	Jan-Apr	>60	---	Moderate	Low-----	Moderate.
Be----- Basher	B	Occasional	Brief to long.	Dec-Apr	1.5-2.0	Apparent	Jan-May	>60	---	High-----	Moderate	Moderate.
BnB*, BnC*: Bath-----	C	None-----	---	---	2.0-4.0	Perched	Nov-Mar	48-60	Hard	Moderate	Moderate	Moderate.
Nassau-----	C	None-----	---	---	>6.0	---	---	10-20	Hard	Moderate	Low-----	High.
Ca----- Canandaigua	D	None to rare	---	---	0-0.5	Apparent	Nov-Jun	>60	---	High-----	High-----	Low.
Cd, Ce, Cf----- Carlisle	A/D	Frequent-----	Long-----	Nov-May	0-1.0	Apparent	Sep-Jun	>60	---	High-----	High-----	Low.
CgA, CgB----- Castile	B	None-----	---	---	1.5-2.0	Apparent	Mar-May	>60	---	High-----	Moderate	Moderate.
ChB, ChC----- Charlton	B	None-----	---	---	>6.0	---	---	>60	---	Low-----	Low-----	High.
CLC*, CLD*: Charlton-----	B	None-----	---	---	>6.0	---	---	>60	---	Low-----	Low-----	High.
Paxton-----	C	None-----	---	---	>6.0	---	---	>60	---	Moderate	Low-----	Moderate.
CnA, CnB, CnC----- Chenango	A	None-----	---	---	>6.0	---	---	>60	---	Moderate	Low-----	Moderate.
CoB, CoC, CoD----- Collamer	C	None-----	---	---	1.5-2.0	Apparent	Mar-May	>60	---	High-----	Moderate	Low.
Du*. Dumps												
ErA, ErB----- Erie	C	None-----	---	---	0.5-1.5	Perched	Dec-May	>60	---	High-----	High-----	Low.

See footnote at end of table.

INGE COUNTY, NEW YORK

This soil is suited to pasture. Erosion is a hazard if areas are overgrazed or grazed when the soil is wet. Proper stocking, rotation grazing, and restricted grazing in wet periods are needed to maintain pasture seedings and control erosion.

Suitability for timber production is good. Forested areas support such trees as sugar maple, northern red oak, and white ash. Equipment limitation and the hazard of erosion are serious problems. Erosion along skid trails can result in deep gullies that prevent the use of the trails. If logging trails and roads are laid out across the slope, this risk is reduced.

This soil is poorly suited to most urban and recreation uses because of slope. Seasonal wetness, moderately slow permeability and the hazard of frost action are additional limitations for many uses. Walls of excavations for underground utilities and basements tend to slough and cave. Excavation of foot slope areas is hazardous because of the danger of mass slides and slumps.

The capability subclass is IVe.

Du—Dumps. These miscellaneous areas consist mostly of excavations that have been filled or are being filled with refuse and trash. In some areas the refuse is dumped in natural low spots with little accompanying excavation, but more commonly a series of trenches dug by backhoe or bulldozer serve as the dump site. Often the refuse is partly covered or mixed with earthy material. The sides of areas are steep, and the floor is nearly level or undulating piles of trash and debris. Areas are mostly irregular or rectangular in shape, depending on topography and ownership boundaries, and are commonly 3 to 15 acres.

The refuse varies widely in degree of decomposition. In some places it is relatively undecomposed. In other areas it is well decomposed or partly burned. In addition to organic wastes, such as garbage, paper, and wood, the refuse commonly contains bottles, cans, wire, slabs of asphalt, bricks, tires, old appliances, and parts of cars. Some areas of decomposing rubbish emit a sulfurlike odor. Rodent infestation is a common problem.

Included in mapping are small pools of water in some of the dumps. In some large areas the soil material covering the debris and rubbish is up to 5 feet thick.

Dumps are generally devoid of vegetation except for scattered bushes and grass in open areas. The earthy floor in excavated areas is often highly compacted, allowing slow infiltration of rainwater. The depth and degree of compaction of the refuse are highly variable.

Abandoned dumps can be difficult to reclaim for farming or timber production. Large quantities of earthy fill and extensive grading are generally needed to adequately landscape areas for tillage and planting. Large amounts of organic matter and fertilizer are needed to make reclaimed areas productive.

Most areas, even if properly landscaped, are not suitable for urban uses because of the hazard of subsidence. Subsidence results from the settling and decom-

position of the buried trashy material. Pungent odors and health hazards can be detrimental for some recreation uses. Onsite investigation is essential to determine the suitability of abandoned dumps for any use.

Pollution of streams, ponds, or ground water by liquid wastes and effluent seeping from dump sites is a hazard in some areas.

No capability subclass is assigned.

ErA—Erie gravelly silt loam, 0 to 3 percent slopes.

This deep, somewhat poorly drained, nearly level soil has a fragipan. It formed in glacial till deposits derived from shale, slate, and sandstone. It occurs as broad, nearly flat hilltops and foot slopes of the uplands. Areas are mainly round or oval and 5 to 10 acres.

Typically the surface layer is dark brown gravelly silt loam 10 inches thick. The subsoil is 46 inches thick. It is mottled grayish brown channery silt loam in the upper 8 inches and is a firm, mottled olive brown channery silt loam fragipan in the lower part. The substratum from 56 to 70 inches is mottled olive brown channery silt loam.

Included with this soil in mapping are small areas of the moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils in a few small depressions. On a few acres there are large stones on the surface.

The seasonal high water table in this Erie soil is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the fragipan and the substratum. Runoff is slow, and available water capacity is moderate to low. Roots are restricted by the dense fragipan to depths of 10 to 24 inches. Natural organic matter content is medium. The soil layers above the pan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas are either idle or pastured. A few are used for hay and cultivated crops.

This soil can be used for cultivated crops but is generally better suited to hay or pasture. Unless the soil is drained, wetness delays planting in spring and often interferes with harvesting in fall. The soil is somewhat difficult to drain because of slow water movement through the fragipan. A combination of subsurface drains, interceptor drains, and open ditch drains is often essential for adequate drainage. Subsurface drains may require backfilling with gravel to be effective. This soil is somewhat more difficult to drain than the gently sloping Erie soil. Minimum tillage, cover crops, and sod crops in the cropping system are needed to preserve soil tilth and maintain organic matter content.

Pasture on this soil is generally fair to good in quality. Grazing in wet periods compacts the soil and destroys desirable grasses. Rotation grazing, proper stocking, lime and fertilizer, and restricted grazing in wet periods are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Forested areas support such trees as black cherry, sugar maple, and northern red oak. Windthrow and seedling mortality are minor hazards because of the restricted root depth. Wetness can be a problem in machine planting of seedlings in spring.

Seasonal wetness and slow or very slow permeability in the fragipan are serious limitations for most urban and recreation uses. Some areas are excellent sites for dugout ponds or small marshes for wetland wildlife.

The capability subclass is IIIw.

ErB—Erie gravelly silt loam, 3 to 8 percent slopes.

This deep, somewhat poorly drained, gently sloping soil has a fragipan. It formed in glacial till deposits derived from shale, slate, and sandstone. It is on foot slopes, on lower hillsides, and along shallow drainageways of the uplands. It commonly receives runoff from higher adjacent soils. Areas are mainly oval and 5 to 20 acres.

Typically the surface layer is dark brown gravelly silt loam 9 inches thick. The subsoil is 45 inches thick. It is mottled grayish brown channery silt loam in the upper 9 inches and a firm, mottled olive brown channery silt loam fragipan in the lower part. The substratum from 54 to 70 inches is mottled olive brown channery silt loam.

Included with this soil in mapping are small areas of the moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils on a few small concave toe slopes. On a few acres there are large stones on the surface.

The water table in this Erie soil is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the pan and substratum. Runoff is medium, and available water capacity is moderate to low. Roots are restricted by the dense pan to depths of 10 to 24 inches. Natural organic matter content is medium. The soil layers above the fragipan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas of this soil are either idle or pastured. A few are used for hay and cultivated crops.

This soil can be used for cultivated crops but is better suited to hay or pasture. Unless the soil is drained, wetness delays planting in spring and often hinders harvesting in fall. This soil is somewhat difficult to drain because of slow water movement through the fragipan. A combination of subsurface drains and interceptor drains is often essential for adequate drainage. Subsurface drains may require backfilling with gravel to be effective. This soil is usually easier to drain than the nearly level Erie soil. Erosion is a hazard, particularly on long slopes and in intensively cultivated areas. Minimum tillage, cover crops, cross slope tillage, and sod crops in the cropping system are needed to preserve tilth, control erosion, and maintain organic matter content.

This soil is fairly well suited to pasture. Grazing in wet periods compacts the soil and destroys desirable grass

species. Rotation grazing, proper stocking, lime and fertilizer, and restricted grazing in wet periods are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Forested areas support such species as black cherry, sugar maple, and northern red oak. Windthrow and seedling mortality are minor hazards because of the restricted root zone. Seasonal wetness can be a problem in machine planting of seedlings in spring.

Seasonal wetness and slow or very slow permeability in the fragipan are serious limitations for most urban and recreation uses. Many areas provide excellent sites for dike ponds.

The capability subclass is IIIw.

ESB—Erie extremely stony soils, gently sloping.

These deep, somewhat poorly drained, gently sloping soils have a fragipan. They formed in glacial till deposits derived from shale, slate, and sandstone. They are on lower hillsides, foot slopes, and hilltops and along shallow drainageways of the uplands. The slope ranges from 3 to 8 percent. Stones and boulders more than 10 inches in diameter and less than 5 feet apart cover the surface. Texture of the surface layer, excluding large stones, is gravelly silt loam, gravelly loam, or gravelly fine sandy loam. Areas are mostly round and 5 to 15 acres.

Typically the surface layer is dark brown gravelly silt loam 4 inches thick. Large stones are at the surface. The subsoil is 46 inches thick. It is mottled grayish brown channery silt loam in the upper 14 inches. The lower part is a firm, mottled olive brown fragipan. The substratum from 50 to 70 inches is mottled olive brown channery silt loam.

Included with these soils in mapping are small areas of moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils on a few small concave toe slopes. Some small areas have very few if any large stones on the surface.

The water table is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the fragipan and substratum. Runoff is medium. Available water capacity is moderate to low. Roots are restricted by the dense fragipan. Natural organic matter content is medium. The soil layers above the pan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas are either idle or forested. A few are unimproved pasture.

These soils are not suited to most cultivated crops or hay because of the large stones on the surface. Drainage is required for optimum crop production if large stones are removed. Where drainage and removal of stones are feasible, cross-slope tillage, cover crops, sod crops in the cropping system, and minimum tillage are needed to maintain tilth and organic matter content and reduce erosion.

Table 10.2a - Runoff Curve Numbers for Urban Areas¹

(Reprinted from: 210-VI-TR-55, Second Ed., June 1986)

Cover Description	Curve numbers for hydrologic soil group				
	Average percent impervious area ²	A	B	C	D
Cover type and hydrologic condition					
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc) ³ :					
Poor condition (grass cover < 50%).....		68	79	86	89
Fair condition (grass cover 50% to 75%).....		49	69	79	84
Good condition (grass cover > 75%).....		39	61	74	80
Impervious areas					
Paved: parking lots, roofs, driveways, etc. (excluding right-of-way).....		98	98	98	98
Streets and roads:					
Paved: curbs and storm sewers (excluding right of way).....		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	98
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way).....		72	82	87	89
Western desert urban areas:					
*Natural desert landscape (pervious areas only) ⁴		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with a 1 to 2 inch sand or gravel mulch and basin boarders).....		96	96	96	96
Urban districts:					
Commercial and business.....	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses]	65	77	85	90	92
1/4 acre.....	38	61	75	83	87
1/3 acre.....	30	57	72	81	86
1/2 acre.....	25	54	70	80	85
1 acre.....	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in Table 10.2c).					
1Average runoff condition and $I_a = 0.2S$					
2The average percent impervious area shown was used to develop composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious area are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 8.3 or 8.4.					
3CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.					
4Composite CN's for natural desert landscaping should be computed using Figure 8.3 or 8.4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.					
5Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 8.3 or 8.4 based on the degree of development (impervious area percentage) and the CN's for newly graded pervious areas.					

**Table 10.3 - Roughness coefficients
(Manning's n) for sheet flow**

Surface description	n ¹
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover < 20%	0.06
Residue cover > 20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses ²	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods: ³	
Light underbrush	0.40
Dense underbrush	0.80

¹The values are a composite of information compiled by Engman (1980)
²Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.
³When selecting n consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

- (2) constant intensity of rainfall excess (that part of a rain available for runoff),
- (3) rainfall duration of 24 hours, and
- (4) minor effect of infiltration on travel time.

Rainfall depth can be obtained from Exhibit 10.1 at the end of this chapter.

Shallow Concentrated Flow

After a maximum of 300 feet, sheet flow usually becomes shallow concentrated flow. The average velocity for this flow can be determined from Figure 10.10 on page 10.20, in which average velocity is a function of watercourse slope and type of channel. Tillage can affect the direction of shallow concentrated flow. Flow may not always be directly down the watershed slope if tillage runs across the slope.

After determining average velocity in Figure 10.10 on page 10.20, use equation 10.4 to estimate travel time for the shallow concentrated flow segment.

Open Channels

Open channels are assumed to begin where surveyed cross section information has been obtained, where channels are visible on aerial photographs, or where blue lines (indicating streams) appear on United States Geological Survey (USGS) quadrangle sheets. Manning's equation or water surface profile information can be used to estimate average flow velocity. Average flow velocity is usually determined for bank-full elevation.

Manning's equation is

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n} \quad [\text{Eq. 10.7}]$$

where

- V = average velocity (ft/sec),
- r = hydraulic radius (ft) and is equal to a/p_w ,
- a = cross sectional flow area (ft²),
- p_w = wetted perimeter (ft),
- s = slope of the hydraulic grade line (channel slope, ft/ft), and
- n = Manning's roughness coefficient for open channel flow.

Manning's "n" values for open channel flow can be obtained from standard textbooks⁹. After average velocity is computed using equation 10.7, T_t for the channel segment can be estimated using equation 10.4.

Reservoirs or Lakes

Sometimes it is necessary to estimate the velocity of flow through a reservoir or lake at the outlet of a watershed to determine travel time. This travel time is normally very small and can be assumed as zero.

Limitations

- Manning's kinematic solution should not be used for sheet flow longer than 300 feet. Equation 10.6 was developed for use with the four standard rainfall intensity-duration relationships.
- In watersheds with storm sewers, carefully identify the appropriate hydraulic flow path to estimate T_c. Storm sewers generally handle only a small portion of a large event. The rest of the peak flow travels by streets, lawns, and so on, to the outlet. Consult a standard hydraulics textbook to determine average velocity in pipes for either pressure or nonpressure flow.
- The minimum T_c used is 0.1 hour.
- A culvert or bridge can act as a reservoir outlet if there is significant storage behind it. The procedures in TR-55 can be used to determine the peak flow upstream of the culvert. Detailed storage routing procedures should be used to determine the outlet through the culvert.
- Figure 10.11 on page 10.22 provides Worksheet 3 for calculating Time of Concentration (T_c) or travel time (T_t).

Exhibit 10.1

New York Rainfall Maps for Different Rainfall Frequencies

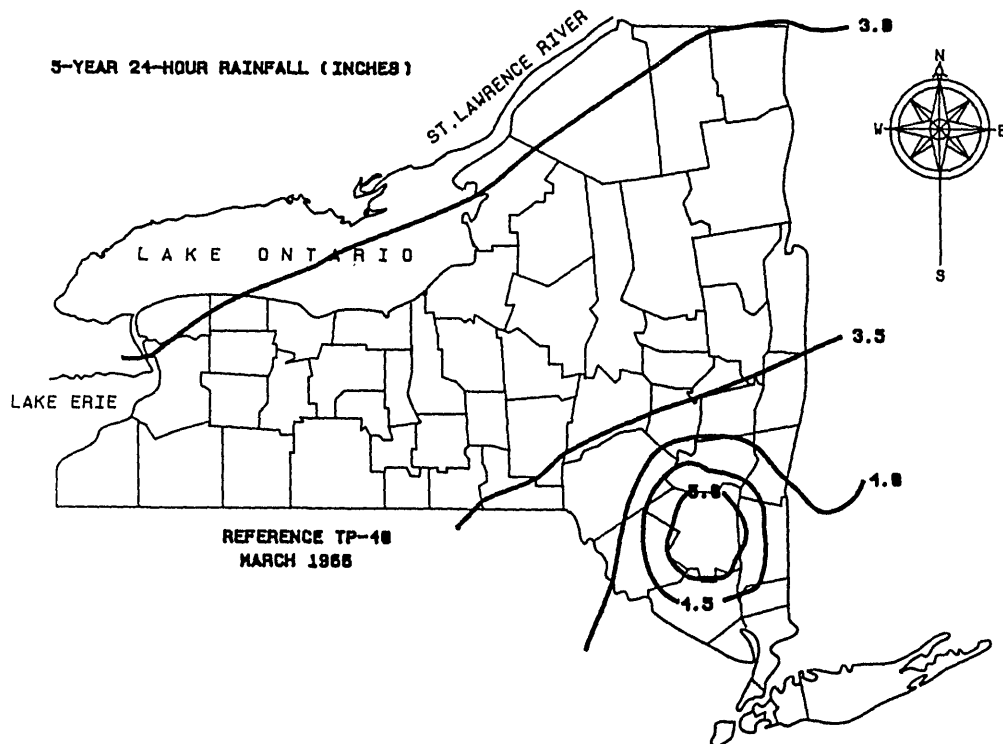
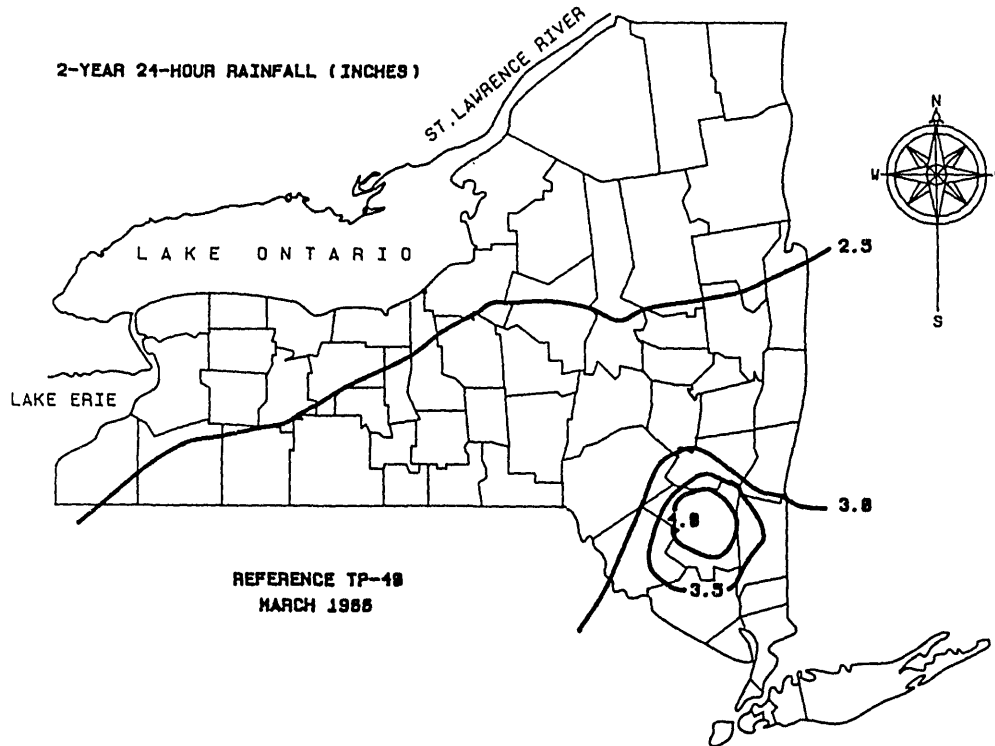


Exhibit 10.1 (cont'd)

New York Rainfall Maps for Different Rainfall Frequencies

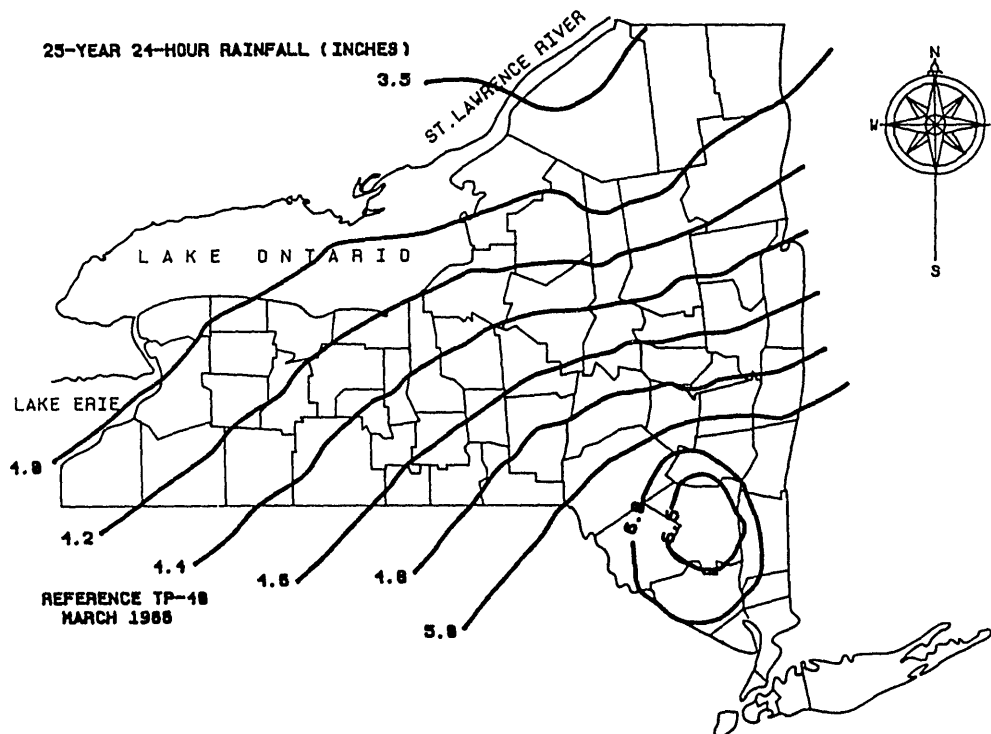
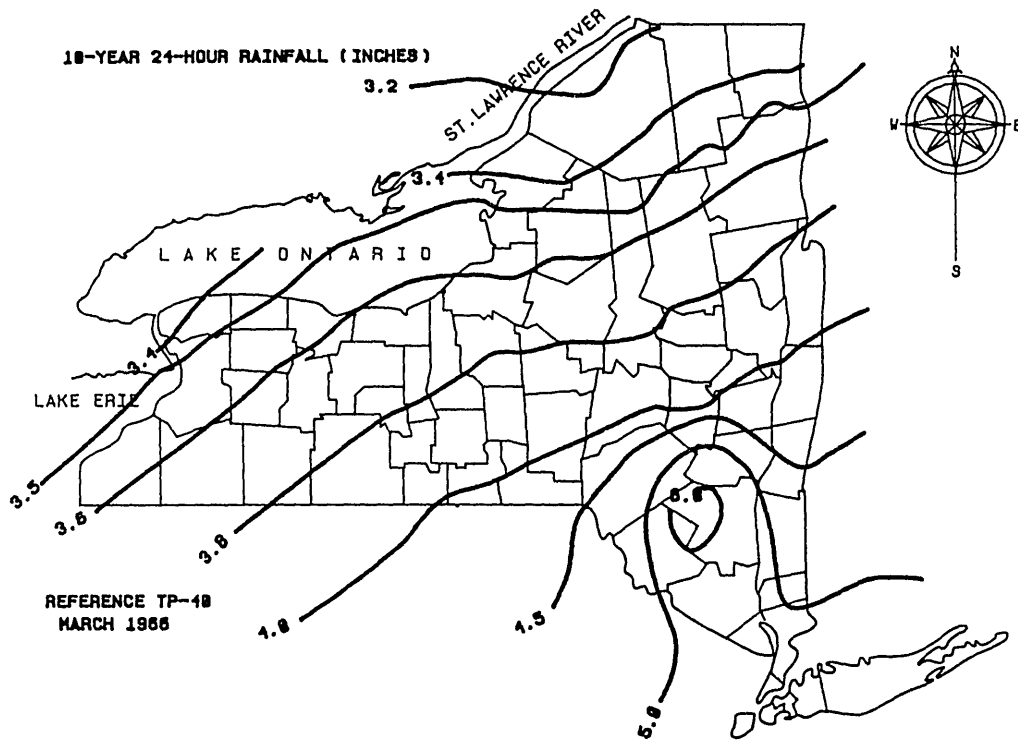
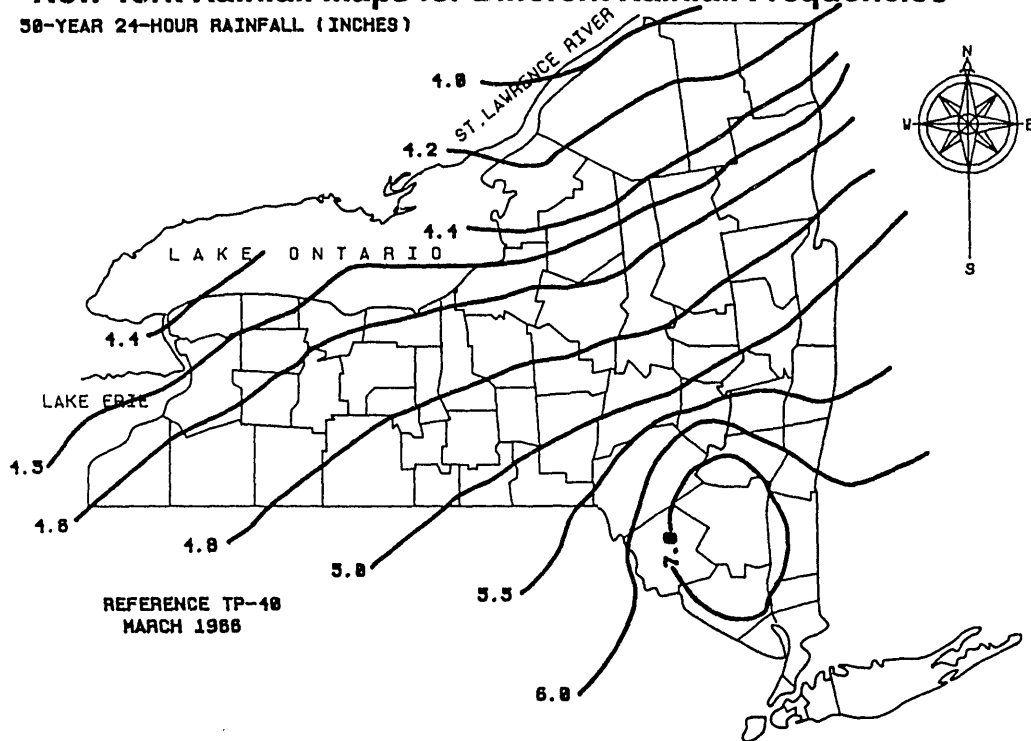


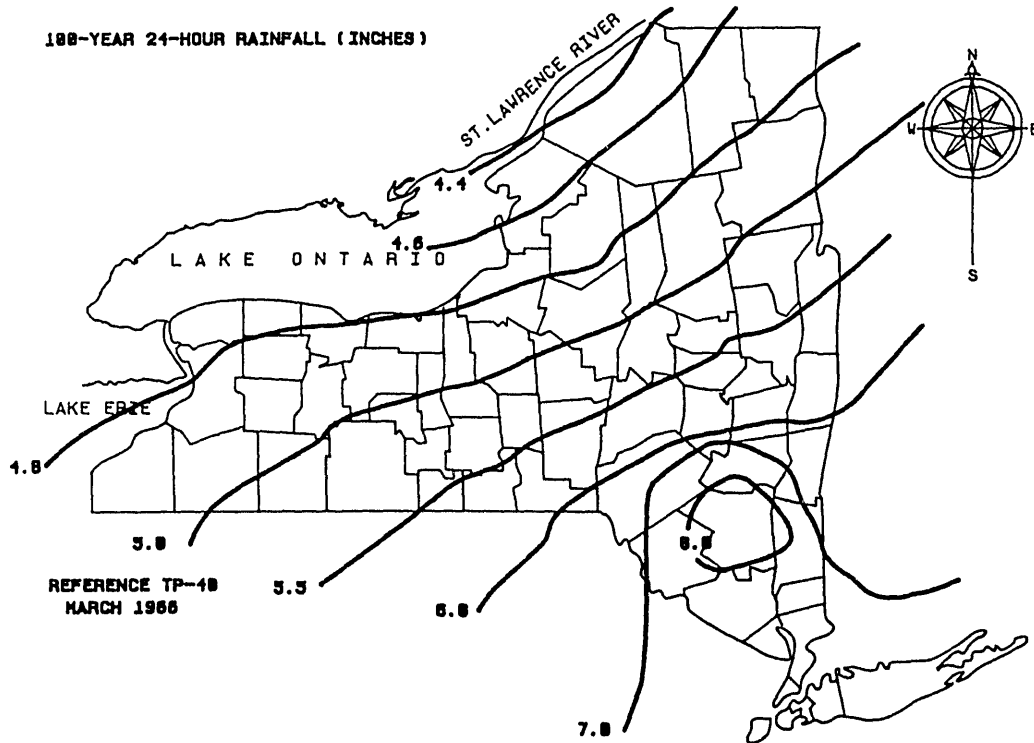
Exhibit 10.1 (cont'd)

New York Rainfall Maps for Different Rainfall Frequencies

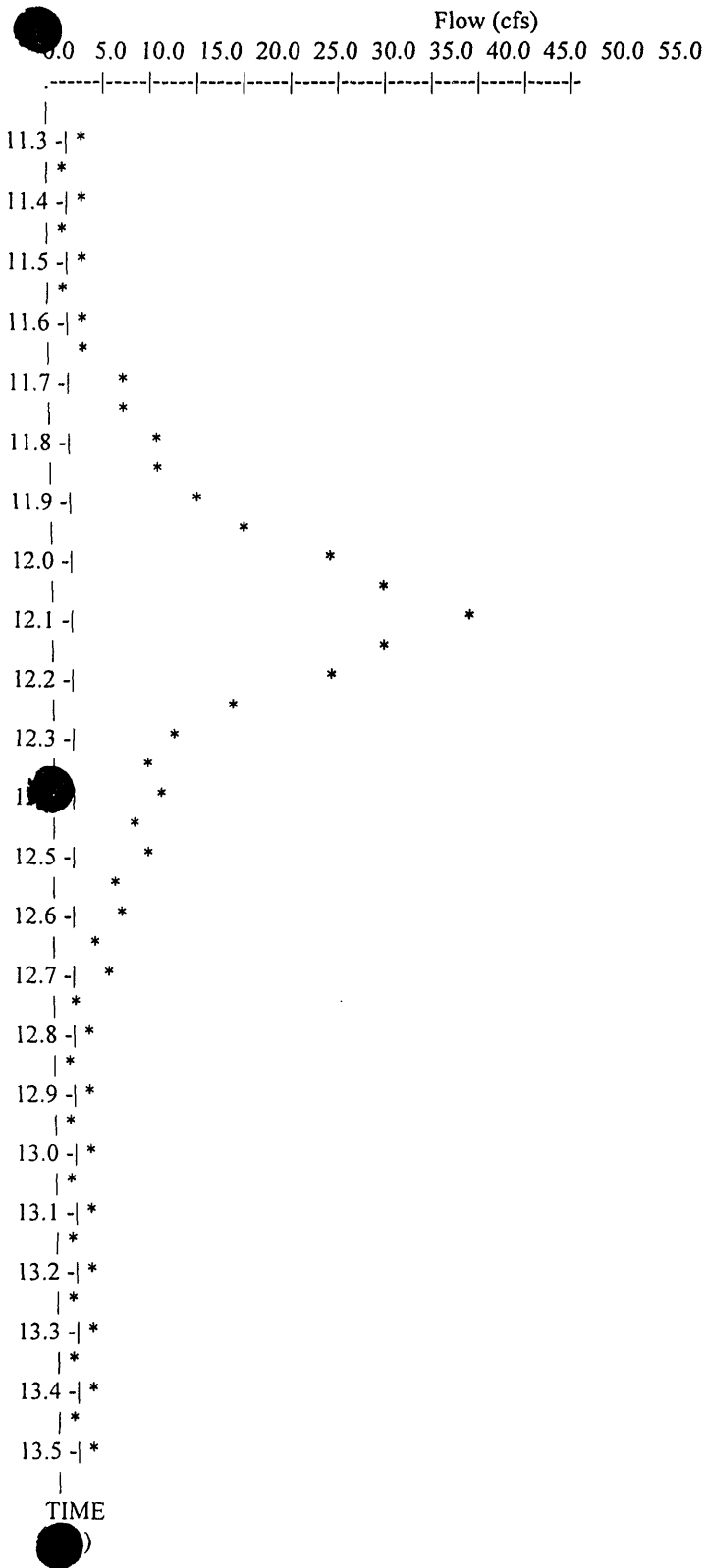
50-YEAR 24-HOUR RAINFALL (INCHES)



100-YEAR 24-HOUR RAINFALL (INCHES)



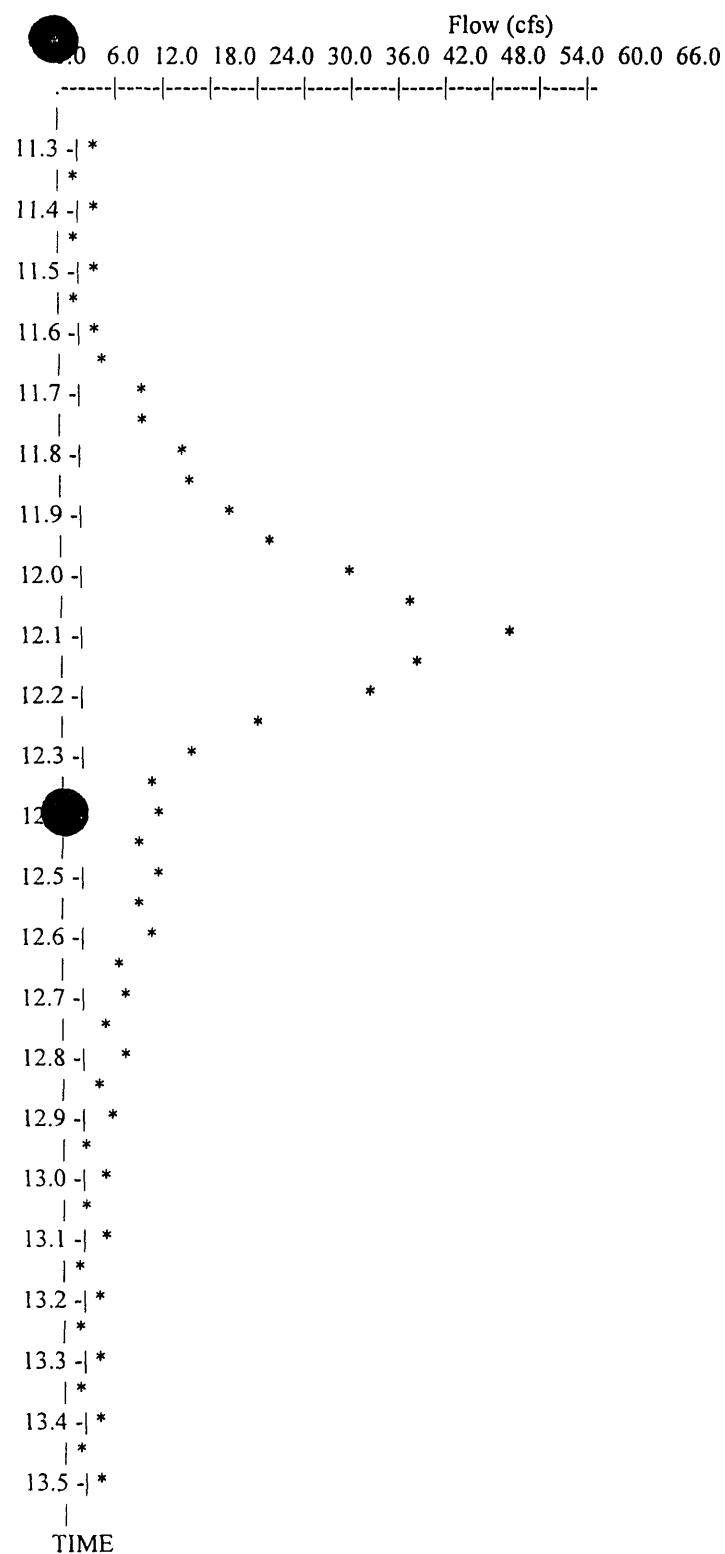
Quick TR-55 Version: 5.46 S/N:
Plotted: 06-04-1996 11:21:06



* File: c:\pondpack\3EX-5 .HYD Qmax = 49.0 cfs

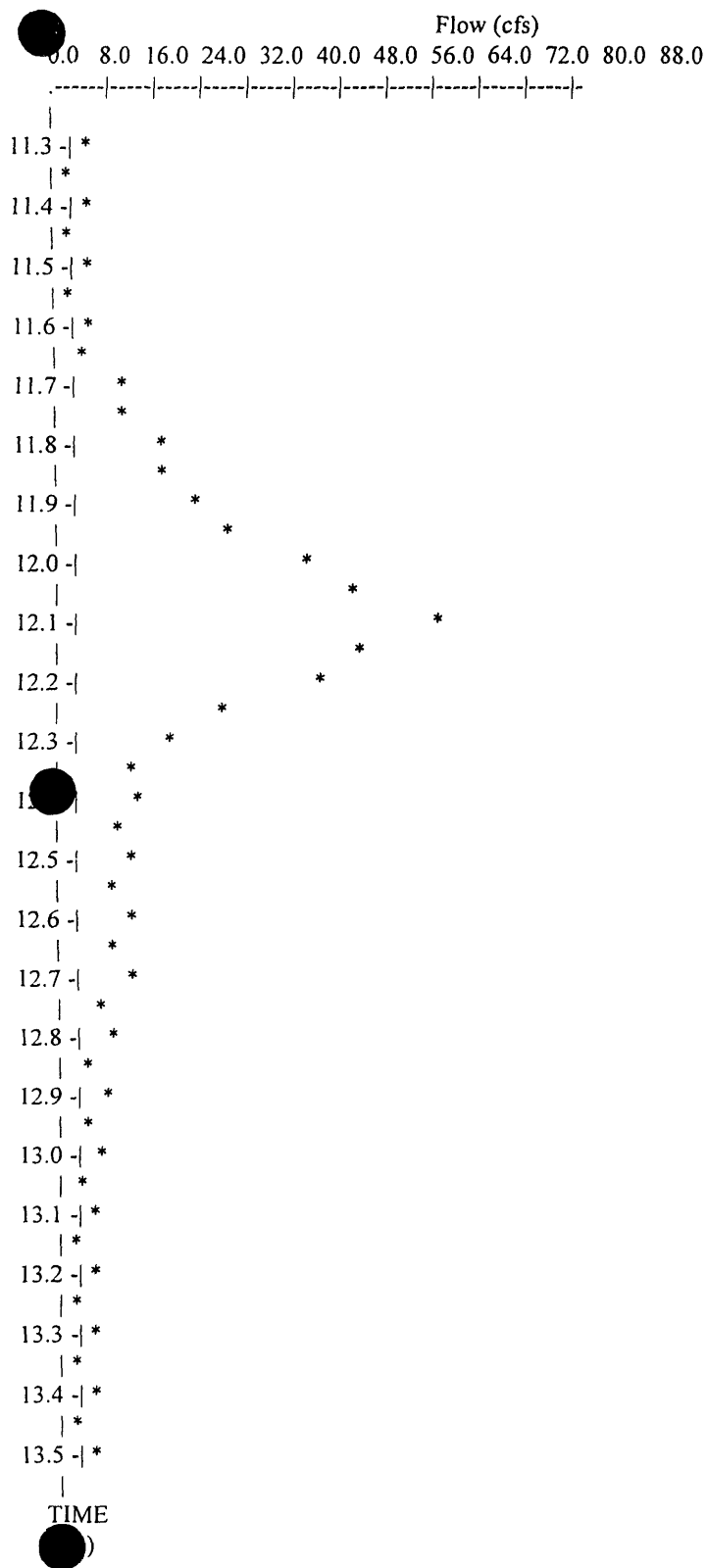
Quick TR-55 Version: 5.46 S/N:

Plotted: 06-04-1996 11:21:33

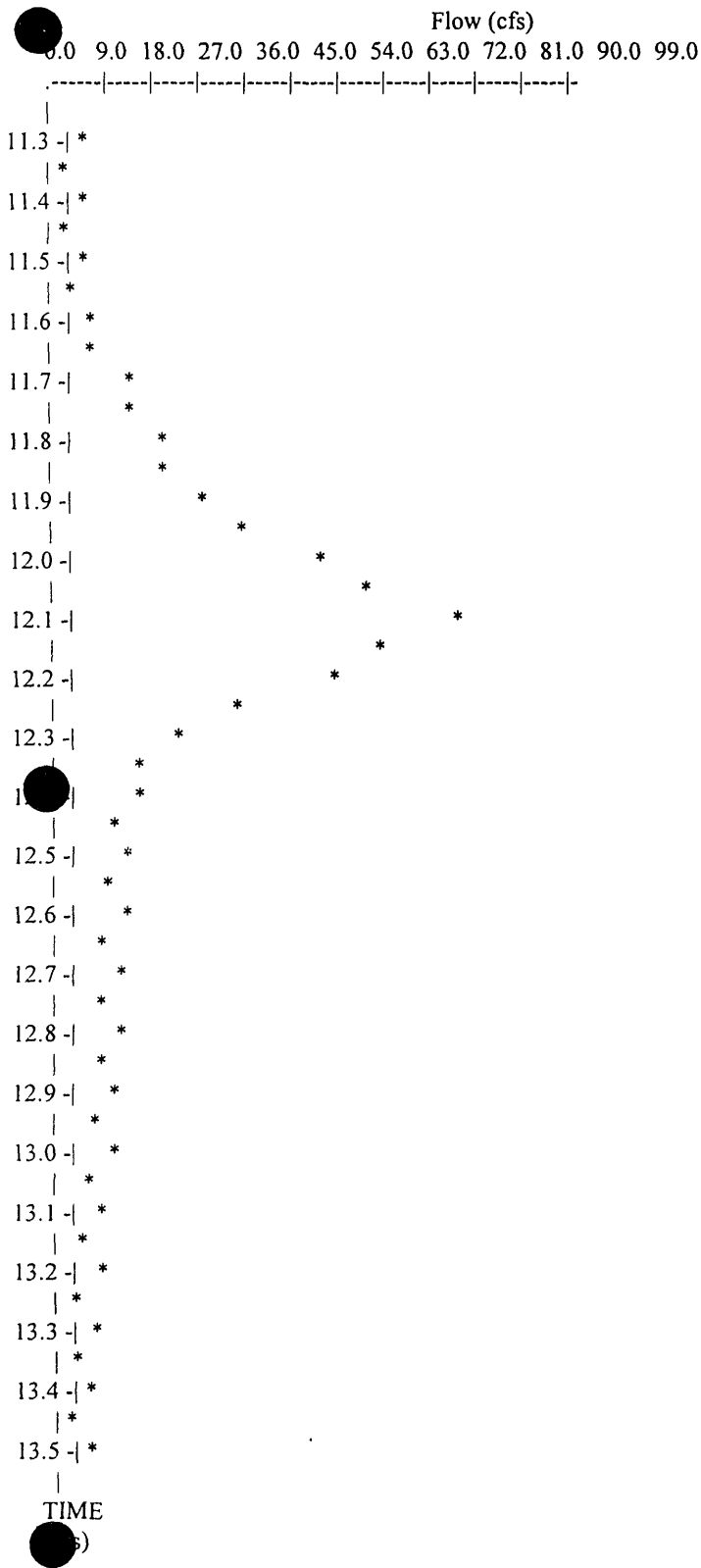


* File: c:\pondpack\3EX-10 .HYD Qmax = 63.0 cfs

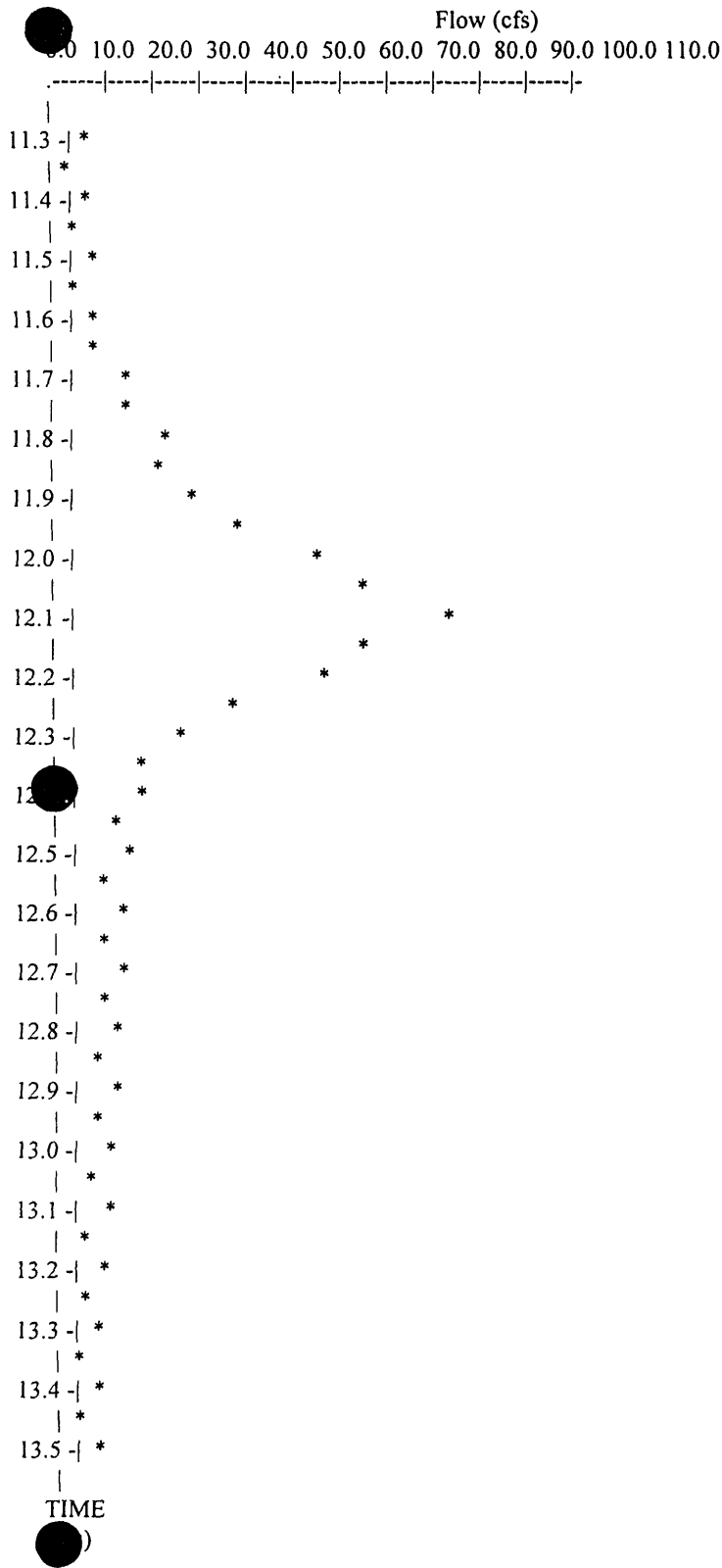
Quick TR-55 Version: 5.46 S/N:
 Plotted: 06-04-1996 11:21:54



* File: c:\pondpack\3EX-25 .HYD Qmax = 72.0 cfs



* File: c:\pondpack\3EX-50 .HYD Qmax = 87.0 cfs



* File: c:\pondpack\3EX-100 .HYD Qmax = 94.0 cfs

Quick TR-55 Ver.5.46 S/N:
Executed: 10:57:06 06-04-1996

ECTS - Scenic Technologies
Existing

RUNOFF CURVE NUMBER SUMMARY

.....

Subarea Description	Area (acres)	CN (weighted)
1-main bldg	2.71	98
2-warehouse blg	0.83	98
3-rubb blg site	0.45	74
4-east parking	1.32	85
5-so. parking	0.70	88
6-north parking	0.91	94
7-west parking	1.00	74
8-northwest cor	1.11	79
9-west side	1.23	74

Quick TR-55 Ver.5.46 S/N:
Executed: 10:57:06 06-04-1996

ECTS - Scenic Technologies
Existing

RUNOFF CURVE NUMBER DATA

.....

Composite Area: 1-main bldg

SURFACE DESCRIPTION	AREA	CN
		(acres)
roof	2.71	98
COMPOSITE AREA ---> 2.71 98.0 (98)		

.....

Composite Area: 2-warehouse blg

SURFACE DESCRIPTION	AREA	CN
		(acres)
roof	0.83	98
COMPOSITE AREA ---> 0.83 98.0 (98)		

.....

Composite Area: 3-rubb blg site

SURFACE DESCRIPTION	AREA	CN
		(acres)
C-grass	0.45	74
COMPOSITE AREA ---> 0.45 74.0 (74)		

.....

Quick TR-55 Ver.5.46 S/N:
Executed: 10:57:06 06-04-1996

Composite Area: 4-east parking

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
paved	0.36	98	
C-grass	0.59	74	
shale/gravel	0.36	89	
COMPOSITE AREA ---> 1.32 84.7 (85)			

Composite Area: 5-so. parking

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
paved	0.33	98	
C-grass	0.37	79	
COMPOSITE AREA ---> 0.70 88.0 (88)			

Composite Area: 6-north parking

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
paved	0.74	98	
C-grass	0.16	74	
COMPOSITE AREA ---> 0.91 93.7 (94)			

Composite Area: 7-west parking

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
C-grass	1.00	74	
COMPOSITE AREA ---> 1.00 74.0 (74)			

Quick TR-55 Ver.5.46 S/N:
Executed: 10:57:06 06-04-1996

Composite Area: 8-northwest cor

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
gravel	0.33	89	
C-grass	0.78	74	
COMPOSITE AREA ---> 1.11 78.5 (79)			

Composite Area: 9-west side

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
C-grass	1.23	74	
COMPOSITE AREA ---> 1.23 74.0 (74)			

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

SUMMARY SHEET FOR Tc or Tt COMPUTATIONS
(Solved for Time using TR-55 Methods)

ECTS - Scenic Technologies
Existing

Subarea descr. Tc or Tt Time (hrs)

Subarea descr.	Tc or Tt	Time (hrs)
1	Tc	0.09
2	Tc	0.12
3	Tc	0.07
4	Tc	0.12
5	Tc	0.16
6	Tc	0.06
7	Tc	0.15
8	Tc	0.05
9	Tc	0.13

Quick TR-55 Ver.5.46 S/N:

Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 1

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description roof
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 100.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
0.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Paved
Flow length, L ft 600.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 2.0328
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.08 = 0.08

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.09

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 2

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description roof
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 30.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.00 = 0.00
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 700.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.12 = 0.12

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.12

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 3

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description grass
Manning's roughness coeff., n 0.0240
Flow length, L (total < or = 300) ft 40.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 370.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg.V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.06 = 0.06

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.07

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 4

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description paved/grass
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 70.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0100
0.8
.007 * (n*L)
T = ----- hrs 0.02 = 0.02
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 560.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.10 = 0.10

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 7.07
Wetted perimeter, Pw ft 9.42
Hydraulic radius, r = a/Pw ft 0.751
Channel slope, s ft/ft 0.0270
Manning's roughness coeff., n 0.0100
2/3 1/2
1.49 * r * s
V = ----- ft/s %20.2200
n
Flow length, L ft 462
T = L / (3600*V) hrs 0.01 = 0.01
.....
TOTAL TIME (hrs) 0.12

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 5

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description paved/grass
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 120.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 800.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.14 = 0.14

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 1.23
Wetted perimeter, Pw ft 3.93
Hydraulic radius, r = a/Pw ft 0.313
Channel slope, s ft/ft 0.0200
Manning's roughness coeff., n 0.0100
2/3 1/2
1.49 * r * s
V = ----- ft/s 9.7135
n
Flow length, L ft 260
T = L / (3600*V) hrs 0.01 = 0.01

.....
TOTAL TIME (hrs) 0.16

Quick TR-55 Ver.5.46 S/N:
 Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
 Existing

Tc COMPUTATIONS FOR: 6

SHEET FLOW (Applicable to Tc only)

Segment ID a
 Surface description paved/grass
 Manning's roughness coeff., n 0.0110
 Flow length, L (total < or = 300) ft 180.0
 Two-yr 24-hr rainfall, P2 in 3.500
 Land slope, s ft/ft 0.0100
 0.8
 $.007 * (n * L)$
 $T = \frac{0.5 \quad 0.4}{P2 * s}$ hrs 0.04 = 0.04

SHALLOW CONCENTRATED FLOW

Segment ID b
 Surface (paved or unpaved)? Unpaved
 Flow length, L ft 290.0
 Watercourse slope, s ft/ft 0.0800
 0.5
 Avg. V = Csf * (s) ft/s 4.5635
 where: Unpaved Csf = 16.1345
 Paved Csf = 20.3282
 $T = L / (3600 * V)$ hrs 0.02 = 0.02

CHANNEL FLOW

Segment ID
 Cross Sectional Flow Area, a sq.ft 0.00
 Wetted perimeter, Pw ft 0.00
 Hydraulic radius, r = a/Pw ft 0.000
 Channel slope, s ft/ft 0.0000
 Manning's roughness coeff., n 0.0000
 $1.49 * r^{2/3} * s^{1/2}$
 $V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$ ft/s 0.0000
 Flow length, L ft 0
 $T = L / (3600 * V)$ hrs 0.00 = 0.00

.....
 TOTAL TIME (hrs) 0.06

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 7

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description grass
Manning's roughness coeff., n 0.0240
Flow length, L (total < or = 300) ft 45.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.2000
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 800.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg.V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.14 = 0.14

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.15

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 8

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description grass
Manning's roughness coeff., n 0.0240
Flow length, L (total < or = 300) ft 100.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0100
0.8
.007 * (n*L)
T = ----- hrs 0.05 = 0.05
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID
Surface (paved or unpaved)?
Flow length, L ft 0.0
Watercourse slope, s ft/ft 0.0000
0.5
Avg.V = Csf * (s) ft/s 0.0000
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.05

Quick TR-55 Ver.5.46 S/N:
Executed: 11:11:03 06-04-1996 c:\pondpack\95003-EX.TCT

ECTS - Scenic Technologies
Existing

Tc COMPUTATIONS FOR: 9

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description grass
Manning's roughness coeff., n 0.0240
Flow length, L (total < or = 300) ft 62.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 700.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.12 = 0.12

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.13

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _ Scenic Technologies

Existing

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.71	98.0	0.10	0.00	4.50	4.26	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	4.50	4.26	1.01 .10
3-rubb bldg	0.45	74.0	0.10	0.00	4.50	1.97	1.16 .16
4-east parking	1.32	85.0	0.10	0.00	4.50	2.91	1.08 .10
5-so.parking	0.70	88.0	0.20	0.00	4.50	3.20	1.06 .10
6-north parking	0.91	94.0	0.10	0.00	4.50	3.82	1.03 .10
7-west parking	1.00	74.0	0.20	0.00	4.50	1.97	1.16 .16
8-northwest cor	1.11	79.0	0.10	0.00	4.50	2.38	1.12 .12
9-west side	1.23	74.0	0.10	0.00	4.50	1.97	1.16 .16

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.26 acres or 0.01603 sq.mi

Peak discharge = 49 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p	
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	Messages
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	Yes	--
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-so.parking	0.16	0.00	0.20	0.00	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.15	0.00	0.20	0.00	Yes	--
8-northwest cor	0.10	0.00	**	**	Yes	--
9-west side	0.13	0.00	0.10	0.00	Yes	--

-
- * Travel time from subarea outfall to composite watershed outfall point.
 - ** Tc & Tt are available in the hydrograph tables.

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _ Scenic Technologies
Existing

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	18	12.1
2-warehouse blg	6	12.1
3-rubb bldg	1	12.0
4-east parking	6	12.1
5-so.parking	3	12.1
6-north parking	5	12.1
7-west parking	2	12.1
8-northwest cor	4	12.1
9-west side	4	12.1
Composite Watershed	49	12.1

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _ Scenic Technologies
Existing

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	0	1	1	6	12	18	11	4	3
2-warehouse blg	0	0	0	2	4	6	3	1	1
3-rubb bldg	0	0	0	0	1	1	1	0	0
4-east parking	0	0	0	2	4	6	4	1	1
5-so.parking	0	0	0	1	1	3	3	2	1
6-north parking	0	0	0	2	4	5	3	1	1
7-west parking	0	0	0	0	1	2	2	1	1
8-northwest cor	0	0	0	1	3	4	3	1	1
9-west side	0	0	0	1	2	4	2	1	1
Total (cfs)	0	1	1	15	32	49	32	12	10

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	2	2	2	1	1	1	1	1	1
2-warehouse blg	1	1	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	0	0	0	0	0	0
5-so.parking	1	0	0	0	0	0	0	0	0
6-north parking	1	1	0	0	0	0	0	0	0
7-west parking	1	0	0	0	0	0	0	0	0
8-northwest cor	1	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	8	5	3	1	1	1	1	1	1

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _ Scenic Technologies

Existing

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	0	0	0	0	0
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	0	0	0	0	0

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	0	14.8	1
11.1	0	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	0
11.6	1	15.4	0
11.7	6	15.5	0
11.8	10	15.6	0
11.9	15	15.7	0
12.0	32	15.8	0
12.1	49	15.9	0
12.2	32	16.0	0
12.3	12	16.1	0
12.4	10	16.2	0
12.5	8	16.3	0
12.6	5	16.4	0
12.7	3	16.5	0
12.8	1	16.6	0
12.9	1	16.7	0
13.0	1	16.8	0
13.1	1	16.9	0
13.2	1	17.0	0
13.3	1	17.1	0
13.4	1	17.2	0
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-5.HYD

ECTS _Scenic Technologies
Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies
Existing

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.71	98.0	0.10	0.00	5.50	5.26	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	5.50	5.26	1.01 .10
3-rubb bldg	0.45	74.0	0.10	0.00	5.50	2.77	1.13 .13
4-east parking	1.32	85.0	0.10	0.00	5.50	3.83	1.06 .10
5-so.parking	0.70	88.0	0.20	0.00	5.50	4.15	1.05 .10
6-north parking	0.91	94.0	0.10	0.00	5.50	4.80	1.02 .10
7-west parking	1.00	74.0	0.20	0.00	5.50	2.77	1.13 .13
8-northwest cor	1.11	79.0	0.10	0.00	5.50	3.24	1.1 .10
9-west side	1.23	74.0	0.10	0.00	5.50	2.77	1.13 .13

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.26 acres or 0.01603 sq.mi

Peak discharge = 63 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Input Values			Rounded Values		Ia/p	
Subarea	Tc	* Tt	Tc	* Tt	Interpolated	Ia/p
Description	(hr)	(hr)	(hr)	(hr)	(Yes/No)	Messages

1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	Yes	--
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-south parking	0.16	0.00	0.20	0.00	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.15	0.00	0.20	0.00	Yes	--
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	Yes	--

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies

Existing

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	22	12.1
2-warehouse blg	7	12.1
3-rubb bldg	2	12.1
4-east parking	8	12.1
5-so.parking	4	12.2
6-north parking	7	12.1
7-west parking	3	12.1
8-northwest cor	6	12.1
9-west side	5	12.1
Composite Watershed	63	12.1

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies

Existing

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	7	14	22	14	5	3
2-warehouse blg	0	0	0	2	4	7	4	1	1
3-rubb bldg	0	0	0	1	1	2	1	0	0
4-east parking	0	0	0	3	5	8	5	2	1
5-so.parking	0	0	0	1	2	3	4	2	1
6-north parking	0	0	0	2	4	7	4	1	1
7-west parking	0	0	0	1	2	3	3	2	1
8-northwest cor	0	0	0	2	4	6	4	1	1
9-west side	0	0	0	2	3	5	3	1	1
Total (cfs)	1	1	1	21	39	63	42	15	10

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	3	2	2	2	1	1	1	1	1
2-warehouse blg	1	1	1	1	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	0	0	0	0
5-so.parking	1	1	0	0	0	0	0	0	0
6-north parking	1	1	1	1	0	0	0	0	0
7-west parking	1	1	0	0	0	0	0	0	0
8-northwest cor	1	1	0	0	0	0	0	0	0
9-west side	1	1	0	0	0	0	0	0	0
Total (cfs)	10	9	5	5	2	1	1	1	1

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies
Existing

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	0	0	0
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	0	0	0

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	8	15.5	1
11.8	14	15.6	1
11.9	21	15.7	1
12.0	39	15.8	1
12.1	63	15.9	1
12.2	42	16.0	1
12.3	15	16.1	1
12.4	10	16.2	1
12.5	10	16.3	0
12.6	9	16.4	0
12.7	5	16.5	0
12.8	5	16.6	0
12.9	3	16.7	0
13.0	2	16.8	0
13.1	2	16.9	0
13.2	1	17.0	0
13.3	1	17.1	0
13.4	1	17.2	0
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-10.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies

Existing

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.71	98.0	0.10	0.00	6.00	5.76	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	6.00	5.76	1.01 .10
3-rubb bldg	0.45	74.0	0.10	0.00	6.00	3.18	1.12 .12
4-east parking	1.32	85.0	0.10	0.00	6.00	4.30	1.06 .10
5-so.parking	0.70	88.0	0.20	0.00	6.00	4.63	1.05 .10
6-north parking	0.91	94.0	0.10	0.00	6.00	5.30	1.02 .10
7-west parking	1.00	74.0	0.20	0.00	6.00	3.18	1.12 .12
8-northwest cor	1.11	79.0	0.10	0.00	6.00	3.68	1.09 .10
9-west side	1.23	74.0	0.10	0.00	6.00	3.18	1.12 .12

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.26 acres or 0.01603 sq.mi

Peak discharge = 72 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p	
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	Messages
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	Yes	--
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-parking	0.16	0.00	0.20	0.00	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.15	0.00	0.20	0.00	Yes	--
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	Yes	--

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies
Existing

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	25	12.1
2-warehouse blg	8	12.1
3-rubb bldg	2	12.1
4-east parking	9	12.1
5-so.parking	4	12.1
6-north parking	8	12.1
7-west parking	4	12.1
8-northwest cor	6	12.1
9-west side	6	12.1
Composite Watershed	72	12.1

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies

Existing

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	8	16	25	15	5	4
2-warehouse blg	0	0	0	2	5	8	5	2	1
3-rubb bldg	0	0	0	1	1	2	1	0	0
4-east parking	0	0	0	3	6	9	6	2	1
5-so.parking	0	0	0	1	2	4	4	2	1
6-north parking	0	0	0	3	5	8	5	2	1
7-west parking	0	0	0	1	2	4	4	2	1
8-northwest cor	0	0	0	2	4	6	4	1	1
9-west side	0	0	0	2	4	6	4	1	1
Total (cfs)	1	1	1	23	45	72	48	17	11

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	3	3	2	2	2	1	1	1	1
2-warehouse blg	1	1	1	1	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	1	0	0	0
5-so.parking	1	1	1	0	0	0	0	0	0
6-north parking	1	1	1	1	0	0	0	0	0
7-west parking	1	1	1	0	0	0	0	0	0
8-northwest cor	1	1	1	0	0	0	0	0	0
9-west side	1	1	1	0	0	0	0	0	0
Total (cfs)	10	10	9	5	3	2	1	1	1

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies

Existing

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	0	0	
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	0	0	

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	8	15.5	1
11.8	16	15.6	1
11.9	23	15.7	1
12.0	45	15.8	1
12.1	72	15.9	1
12.2	48	16.0	1
12.3	17	16.1	1
12.4	11	16.2	1
12.5	10	16.3	1
12.6	10	16.4	1
12.7	9	16.5	1
12.8	5	16.6	1
12.9	4	16.7	1
13.0	3	16.8	0
13.1	2	16.9	0
13.2	2	17.0	0
13.3	2	17.1	0
13.4	1	17.2	0
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-25.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies

Existing

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.71	98.0	0.10	0.00	7.00	6.76	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	7.00	6.76	1.01 .10
3-rubb bldg	0.45	74.0	0.10	0.00	7.00	4.04	1.1 .10
4-east parking	1.32	85.0	0.10	0.00	7.00	5.25	1.05 .10
5-so.parking	0.70	88.0	0.20	0.00	7.00	5.59	1.04 .10
6-north parking	0.91	94.0	0.10	0.00	7.00	6.29	1.02 .10
7-west parking	1.00	74.0	0.20	0.00	7.00	4.04	1.1 .10
8-northwest cor	1.11	79.0	0.10	0.00	7.00	4.58	1.08 .10
9-west side	1.23	74.0	0.10	0.00	7.00	4.04	1.1 .10

* Travel time from subarea outfall to composite watershed outfall point.

1 -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.26 acres or 0.01603 sq.mi

Peak discharge = 87 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p	
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	Ia/p Messages
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-so.parking	0.16	0.00	0.20	0.00	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.15	0.00	0.20	0.00	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies

Existing

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	29	12.1
2-warehouse blg	9	12.1
3-rubb bldg	3	12.1
4-east parking	11	12.1
5-so.parking	5	12.1
6-north parking	9	12.1
7-west parking	5	12.1
8-northwest cor	8	12.1
9-west side	8	12.1
-----	-----	-----
Composite Watershed	87	12.1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies

Existing

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	2	10	19	29	18	6	4
2-warehouse blg	0	0	0	3	6	9	6	2	1
3-rubb bldg	0	0	0	1	2	3	2	1	0
4-east parking	0	0	1	4	7	11	7	2	2
5-so.parking	0	0	0	1	2	5	5	3	2
6-north parking	0	0	0	3	6	9	6	2	1
7-west parking	0	0	0	1	3	5	5	3	2
8-northwest cor	0	0	0	3	5	8	5	2	1
9-west side	0	0	0	3	5	8	5	2	1
Total (cfs)	1	1	3	29	55	87	59	23	14

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	4	3	2	2	2	2	1	1	1
2-warehouse blg	1	1	1	1	1	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	1	1	0	0
5-so.parking	1	1	1	1	0	0	0	0	0
6-north parking	1	1	1	1	1	1	0	0	0
7-west parking	1	1	1	1	0	0	0	0	0
8-northwest cor	1	1	1	1	1	0	0	0	0
9-west side	1	1	1	1	1	0	0	0	0
Total (cfs)	11	10	9	9	7	4	2	1	1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies
Existing

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	1	1	1
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	1	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	1	0	0	0	0

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	2	15.2	1
11.5	2	15.3	1
11.6	3	15.4	1
11.7	12	15.5	1
11.8	20	15.6	1
11.9	29	15.7	1
12.0	55	15.8	1
12.1	87	15.9	1
12.2	59	16.0	1
12.3	23	16.1	1
12.4	14	16.2	1
12.5	11	16.3	1
12.6	10	16.4	1
12.7	9	16.5	1
12.8	9	16.6	1
12.9	8	16.7	1
13.0	7	16.8	1
13.1	5	16.9	1
13.2	4	17.0	1
13.3	3	17.1	1
13.4	2	17.2	1
13.5	2	17.3	1
13.6	1	17.4	1
13.7	1	17.5	1
13.8	1	17.6	1
13.9	1	17.7	1
14.0	1	17.8	1
14.1	1	17.9	1
14.2	1	18.0	1
14.3	1	18.1	1
14.4	1	18.2	1
14.5	1	18.3	1

14.6	1	18.4	1
14.7	1	18.5	0

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-50.HYD

ECTS _ Scenic Technologies
Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS _ Scenic Technologies

Existing

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff input/used	Ia/p
1-main bldg	2.71	98.0	0.10	0.00	7.50	7.26 I.01	.10
2-warehouse blg	0.83	98.0	0.10	0.00	7.50	7.26 I.01	.10
3-rubb bldg	0.45	74.0	0.10	0.00	7.50	4.48 I.09	.10
4-east parking	1.32	85.0	0.10	0.00	7.50	5.73 I.05	.10
5-so.parking	0.70	88.0	0.20	0.00	7.50	6.08 I.04	.10
6-north parking	0.91	94.0	0.10	0.00	7.50	6.78 I.02	.10
7-west parking	1.00	74.0	0.20	0.00	7.50	4.48 I.09	.10
8-northwest cor	1.11	79.0	0.10	0.00	7.50	5.04 I.07	.10
9-west side	1.23	74.0	0.10	0.00	7.50	4.48 I.09	.10

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.26 acres or 0.01603 sq.mi

Peak discharge = 94 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p	
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	Messages
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-so.parking	0.16	0.00	0.20	0.00	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.15	0.00	0.20	0.00	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS _ Scenic Technologies
Existing

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	31	12.1
2-warehouse blg	10	12.1
3-rubb bldg	3	12.1
4-east parking	12	12.1
5-so.parking	5	12.1
6-north parking	10	12.1
7-west parking	6	12.2
8-northwest cor	9	12.1
9-west side	9	12.1
Composite Watershed	94	12.1

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS _ Scenic Technologies
Existing

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	2	10	20	31	19	7	5
2-warehouse blg	0	0	0	3	6	10	6	2	1
3-rubb bldg	0	0	0	1	2	3	2	1	0
4-east parking	0	0	1	4	8	12	7	3	2
5-so.parking	0	0	0	1	3	5	5	3	2
6-north parking	0	0	1	3	6	10	6	2	1
7-west parking	0	0	0	1	3	5	6	3	2
8-northwest cor	0	0	0	3	6	9	5	2	1
9-west side	0	0	0	3	6	9	5	2	1
Total (cfs)	1	1	4	29	60	94	61	25	15

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	4	3	3	2	2	2	1	1	
2-warehouse blg	1	1	1	1	1	1	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	1	1	1	0
5-so.parking	1	1	1	1	0	0	0	0	0
6-north parking	1	1	1	1	1	1	0	0	0
7-west parking	1	1	1	1	0	0	0	0	0
8-northwest cor	1	1	1	1	1	0	0	0	0
9-west side	1	1	1	1	1	0	0	0	0
Total (cfs)	11	10	10	9	7	5	3	2	1

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS _ Scenic Technologies
Existing

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	1	1	1
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	1	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	1	0	0	0	0

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS _ Scenic Technologies

Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	2	15.2	1
11.5	3	15.3	1
11.6	4	15.4	1
11.7	12	15.5	1
11.8	21	15.6	1
11.9	29	15.7	1
12.0	60	15.8	1
12.1	94	15.9	1
12.2	61	16.0	1
12.3	25	16.1	1
12.4	15	16.2	1
12.5	11	16.3	1
12.6	10	16.4	1
12.7	10	16.5	1
12.8	9	16.6	1
12.9	8	16.7	1
13.0	7	16.8	1
13.1	6	16.9	1
13.2	5	17.0	1
13.3	4	17.1	1
13.4	3	17.2	1
13.5	3	17.3	1
13.6	2	17.4	1
13.7	2	17.5	1
13.8	1	17.6	1
13.9	1	17.7	1
14.0	1	17.8	1
14.1	1	17.9	1
14.2	1	18.0	1
14.3	1	18.1	1
14.4	1	18.2	1
14.5	1	18.3	1

14.6	1	18.4	1
14.7	1	18.5	0

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 11:15:58

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\3EX-100.HYD

ECTS__Scenic Technologies
Existing

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Quick TR-55 Ver.5.46 S/N:
Executed: 09:57:18 06-04-1996

ECTS - Scenic Technologies
Developed

RUNOFF CURVE NUMBER SUMMARY

Subarea Description	Area (acres)	CN (weighted)
1-main bldg	2.88	98
2-warehouse blg	0.83	98
3-rubb bldg	0.45	94
4-east parking	1.32	87
5-so. parking	0.94	92
6-north parking	0.82	93
7-west parking	1.00	89
8-northwest cor	1.11	88
9-west side	1.23	76

Quick TR-55 Ver.5.46 S/N:
Executed: 09:57:18 06-04-1996

ECTS - Scenic Technologies
Developed

RUNOFF CURVE NUMBER DATA

Composite Area: 1-main bldg

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
roof	2.88	98	
COMPOSITE AREA ---> 2.88 98.0 (98)			

Composite Area: 2-warehouse blg

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
roof	0.83	98	
COMPOSITE AREA ---> 0.83 98.0 (98)			

Composite Area: 3-rubb bldg

SURFACE DESCRIPTION	AREA	CN	
		(acres)	
roof	0.24	98	
C-gravel	0.21	89	
COMPOSITE AREA ---> 0.45 93.8 (94)			

Quick TR-55 Ver.5.46 S/N:
Executed: 09:57:18 06-04-1996

Composite Area: 4-east parking

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.72	98
C-grass	0.59	74
COMPOSITE AREA ---> 1.32 87.2 (87)		

Composite Area: 5-so. parking

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.66	98
C-grass	0.28	79
COMPOSITE AREA ---> 0.94 92.3 (92)		

Composite Area: 6-north parking

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.66	98
C-grass	0.16	74
COMPOSITE AREA ---> 0.82 93.2 (93)		

Composite Area: 7-west parking

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.54	98
C-grass	0.46	79
COMPOSITE AREA ---> 1.00 89.3 (89)		

Quick TR-55 Ver.5.46 S/N:
Executed: 09:57:18 06-04-1996

Composite Area: 8-northwest cor

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.67	98
C-grass	0.44	74
COMPOSITE AREA ---> 1.11 88.4 (88)		

Composite Area: 9-west side

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.12	98
C-grass	1.11	74
COMPOSITE AREA ---> 1.23 76.3 (76)		

Quick TR-55 Ver.5.46 S/N:
Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

SUMMARY SHEET FOR Tc or Tt COMPUTATIONS
(Solved for Time using TR-55 Methods)

ECTS - Scenic Technologies
Developed

Subarea descr. Tc or Tt Time (hrs)

1	Tc	0.02
2	Tc	0.12
3	Tc	0.05
4	Tc	0.12
5	Tc	0.04
6	Tc	0.04
7	Tc	0.06
8	Tc	0.03
9	Tc	0.13

ECTS - Scenic Technologies
 Developed

Tc COMPUTATIONS FOR: 1

SHEET FLOW (Applicable to Tc only)

Segment ID a
 Surface description roof
 Manning's roughness coeff., n 0.0110
 Flow length, L (total < or = 300) ft 100.0
 Two-yr 24-hr rainfall, P2 in 3.500
 Land slope, s ft/ft 0.0800
 0.8
 $.007 * (n * L)$
 $T = \frac{0.5 \quad 0.4}{P2 * s}$ hrs 0.01 = 0.01

SHALLOW CONCENTRATED FLOW

Segment ID
 Surface (paved or unpaved)?
 Flow length, L ft 0.0
 Watercourse slope, s ft/ft 0.0000
 0.5
 Avg. V = Csf * (s) ft/s 0.0000
 where: Unpaved Csf = 16.1345
 Paved Csf = 20.3282
 $T = L / (3600 * V)$ hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID c
 Cross Sectional Flow Area, a sq.ft 7.07
 Wetted perimeter, Pw ft 9.42
 Hydraulic radius, r = a/Pw ft 0.751
 Channel slope, s ft/ft 0.0270
 Manning's roughness coeff., n 0.0100
 $1.49 * r^{2/3} * s^{1/2}$
 $V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$ ft/s %20.2200
 Flow length, L ft 550
 $T = L / (3600 * V)$ hrs 0.01 = 0.01

.....
 TOTAL TIME (hrs) 0.02

Quick TR-55 Ver.5.46 S/N:
 Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
 Developed

Tc COMPUTATIONS FOR: 2

SHEET FLOW (Applicable to Tc only)

Segment ID a
 Surface description roof
 Manning's roughness coeff., n 0.0110
 Flow length, L (total < or = 300) ft 30.0
 Two-yr 24-hr rainfall, P2 in 3.500
 Land slope, s ft/ft 0.0800

$$0.8$$

$$.007 * (n * L)$$

$$T = \frac{0.5}{P2} \frac{0.4}{s} \text{ hrs } 0.00 = 0.00$$

SHALLOW CONCENTRATED FLOW

Segment ID b
 Surface (paved or unpaved)? Unpaved
 Flow length, L ft 700.0
 Watercourse slope, s ft/ft 0.0100

$$0.5$$

$$\text{Avg. } V = Csf * (s) \text{ ft/s } 1.6135$$

where: Unpaved Csf = 16.1345
 Paved Csf = 20.3282

$$T = L / (3600 * V) \text{ hrs } 0.12 = 0.12$$

CHANNEL FLOW

Segment ID
 Cross Sectional Flow Area, a sq.ft 0.00
 Wetted perimeter, Pw ft 0.00
 Hydraulic radius, r = a/Pw ft 0.000
 Channel slope, s ft/ft 0.0000
 Manning's roughness coeff., n 0.0000

$$1.49 * r^{2/3} * s^{1/2}$$

$$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n} \text{ ft/s } 0.0000$$

Flow length, L ft 0

$$T = L / (3600 * V) \text{ hrs } 0.00 = 0.00$$

.....
 TOTAL TIME (hrs) 0.12

Quick TR-55 Ver.5.46 S/N:

Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
Developed

Tc COMPUTATIONS FOR: 3

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description roof
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 40.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
 $T = \frac{0.5 \cdot 0.4}{P2 * s}$ hrs 0.01 = 0.01

SHALLOW CONCENTRATED FLOW

Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 170.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
 $T = L / (3600 * V)$ hrs 0.03 = 0.03

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 1.23
Wetted perimeter, Pw ft 3.93
Hydraulic radius, r = a/Pw ft 0.313
Channel slope, s ft/ft 0.0060
Manning's roughness coeff., n 0.0100
 $V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$ ft/s 5.3203
Flow length, L ft 384
 $T = L / (3600 * V)$ hrs 0.02 = 0.02

.....
TOTAL TIME (hrs) 0.05

Quick TR-55 Ver.5.46 S/N:
 Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
 Developed

Tc COMPUTATIONS FOR: 4

SHEET FLOW (Applicable to Tc only)

Segment ID a
 Surface description paved/grass
 Manning's roughness coeff., n 0.0110
 Flow length, L (total < or = 300) ft 70.0
 Two-yr 24-hr rainfall, P2 in 3.500
 Land slope, s ft/ft 0.0100

$$T = \frac{0.574 \cdot (P_2)^{0.467} \cdot (L)^{0.76} \cdot (S)^{-0.165}}{C_s} \text{ hrs} = 0.02$$

SHALLOW CONCENTRATED FLOW

Segment ID b
 Surface (paved or unpaved)? Unpaved
 Flow length, L ft 560.0
 Watercourse slope, s ft/ft 0.0100

$$T = L / (3600 \cdot V) \text{ hrs} = 0.10$$

CHANNEL FLOW

Segment ID c
 Cross Sectional Flow Area, a sq.ft 7.07
 Wetted perimeter, Pw ft 9.42
 Hydraulic radius, r = a/Pw ft 0.751
 Channel slope, s ft/ft 0.0270
 Manning's roughness coeff., n 0.0100

$$V = \frac{1.49 \cdot r^{2/3} \cdot s^{1/2}}{n} \text{ ft/s} = 20.2200$$

 Flow length, L ft 462

$$T = L / (3600 \cdot V) \text{ hrs} = 0.01$$

TOTAL TIME (hrs) 0.12

Quick TR-55 Ver.5.46 S/N:
Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
Developed

Tc COMPUTATIONS FOR: 5

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description paved/grass
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 120.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID
Surface (paved or unpaved)?
Flow length, L ft 0.0
Watercourse slope, s ft/ft 0.0000
0.5
Avg. V = Csf * (s) ft/s 0.0000
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 1.23
Wetted perimeter, Pw ft 3.93
Hydraulic radius, r = a/Pw ft 0.313
Channel slope, s ft/ft 0.0200
Manning's roughness coeff., n 0.0100
2/3 1/2
1.49 * r * s
V = ----- ft/s 9.7135
n
Flow length, L ft 1056
T = L / (3600*V) hrs 0.03 = 0.03

.....
TOTAL TIME (hrs) 0.04

Quick TR-55 Ver.5.46 S/N:
Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
Developed

Tc COMPUTATIONS FOR: 6

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description paved/grass
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 180.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0100
0.8
.007 * (n*L)
T = ----- hrs 0.04 = 0.04
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID
Surface (paved or unpaved)?
Flow length, L ft 0.0
Watercourse slope, s ft/ft 0.0000
0.5
Avg. V = Csf * (s) ft/s 0.0000
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 7.07
Wetted perimeter, Pw ft 9.42
Hydraulic radius, r = a/Pw ft 0.751
Channel slope, s ft/ft 0.0300
Manning's roughness coeff., n 0.0100
2/3 1/2
1.49 * r * s
V = ----- ft/s %21.3137
n
Flow length, L ft 290
T = L / (3600*V) hrs 0.00 = 0.00

.....
TOTAL TIME (hrs) 0.04

Quick TR-55 Ver.5.46 S/N:
Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
Developed

Tc COMPUTATIONS FOR: 7

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description paved/grass
Manning's roughness coeff., n 0.0110
Flow length, L (total < or = 300) ft 90.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0100
0.8
.007 * (n*L)
T = ----- hrs 0.02 = 0.02
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

Segment ID
Surface (paved or unpaved)?
Flow length, L ft 0.0
Watercourse slope, s ft/ft 0.0000
0.5
Avg. V = Csf * (s) ft/s 0.0000
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID c
Cross Sectional Flow Area, a sq.ft 1.77
Wetted perimeter, Pw ft 4.71
Hydraulic radius, r = a/Pw ft 0.376
Channel slope, s ft/ft 0.0060
Manning's roughness coeff., n 0.0100
2/3 1/2
1.49 * r * s
V = ----- ft/s 6.0103
n
Flow length, L ft 796
T = L / (3600*V) hrs 0.04 = 0.04

.....
TOTAL TIME (hrs) 0.06

ECTS - Scenic Technologies
 Developed

Tc COMPUTATIONS FOR: 8

SHEET FLOW (Applicable to Tc only)

Segment ID a
 Surface description paved/grass
 Manning's roughness coeff., n 0.0110
 Flow length, L (total < or = 300) ft 100.0
 Two-yr 24-hr rainfall, P2 in 3.500
 Land slope, s ft/ft 0.0100

$$T = \frac{0.007 * (n * L)^{0.5}}{P2^{0.4} * s} \text{ hrs } 0.03 = 0.03$$

SHALLOW CONCENTRATED FLOW

Segment ID
 Surface (paved or unpaved)?
 Flow length, L ft 0.0
 Watercourse slope, s ft/ft 0.0000

$$\text{Avg. } V = Csf * (s)^{0.5} \text{ ft/s } 0.0000$$

 where: Unpaved Csf = 16.1345
 Paved Csf = 20.3282

$$T = L / (3600 * V) \text{ hrs } 0.00 = 0.00$$

CHANNEL FLOW

Segment ID c
 Cross Sectional Flow Area, a sq.ft 7.07
 Wetted perimeter, Pw ft 9.42
 Hydraulic radius, r = a/Pw ft 0.751
 Channel slope, s ft/ft 0.0080
 Manning's roughness coeff., n 0.0100

$$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n} \text{ ft/s } 11.0064$$

Flow length, L ft 102

$$T = L / (3600 * V) \text{ hrs } 0.00 = 0.00$$

.....
 TOTAL TIME (hrs) 0.03

Quick TR-55 Ver.5.46 S/N:

Executed: 09:56:24 06-04-1996 c:\pondpack\95003ECT.TCT

ECTS - Scenic Technologies
Developed

Tc COMPUTATIONS FOR: 9

SHEET FLOW (Applicable to Tc only)

Segment ID a
Surface description grass/paved
Manning's roughness coeff., n 0.0240
Flow length, L (total < or = 300) ft 62.0
Two-yr 24-hr rainfall, P2 in 3.500
Land slope, s ft/ft 0.0800
0.8
.007 * (n*L)
T = ----- hrs 0.01 = 0.01
0.5 0.4
P2 * s

SHALLOW CONCENTRATED FLOW

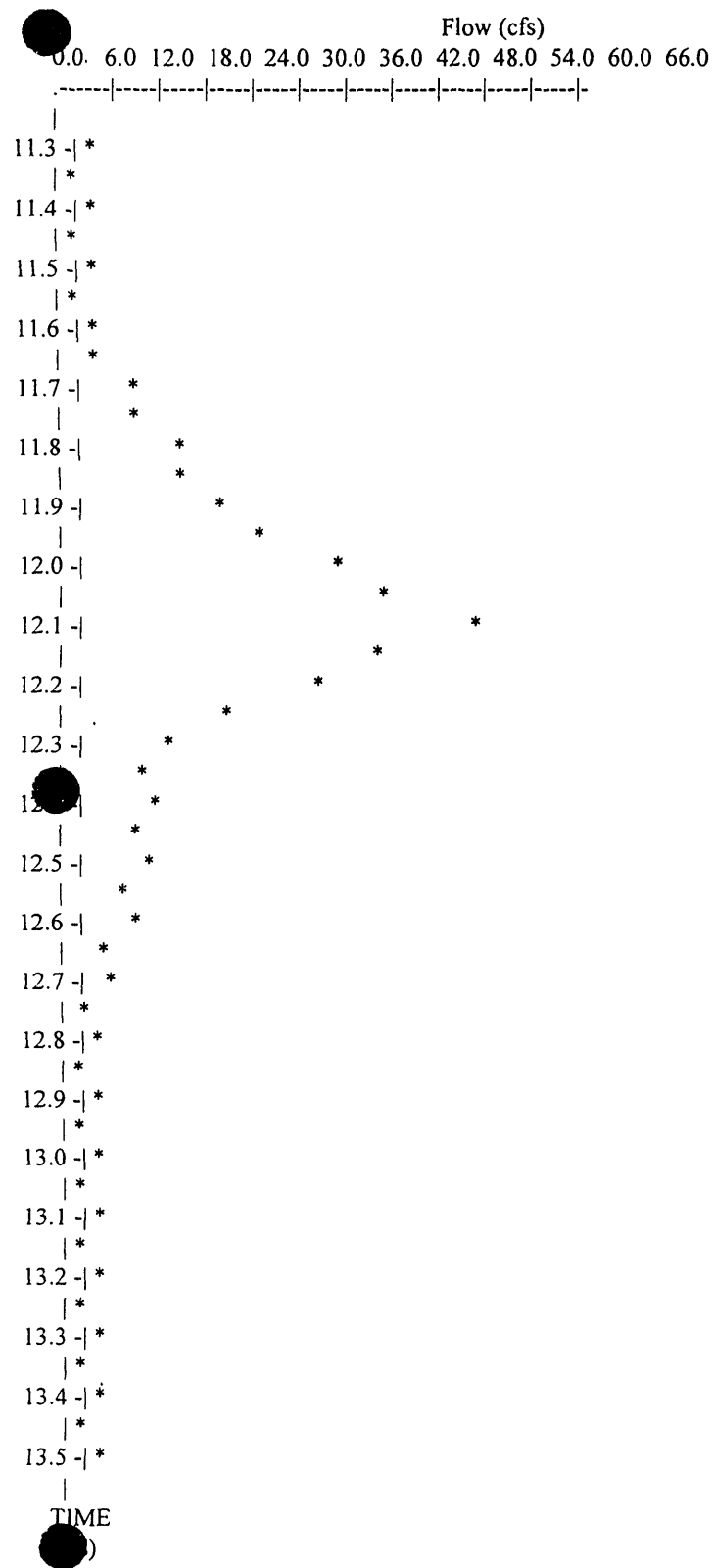
Segment ID b
Surface (paved or unpaved)? Unpaved
Flow length, L ft 700.0
Watercourse slope, s ft/ft 0.0100
0.5
Avg. V = Csf * (s) ft/s 1.6135
where: Unpaved Csf = 16.1345
Paved Csf = 20.3282
T = L / (3600*V) hrs 0.12 = 0.12

CHANNEL FLOW

Segment ID
Cross Sectional Flow Area, a sq.ft 0.00
Wetted perimeter, Pw ft 0.00
Hydraulic radius, r = a/Pw ft 0.000
Channel slope, s ft/ft 0.0000
Manning's roughness coeff., n 0.0000
2/3 1/2
1.49 * r * s
V = ----- ft/s 0.0000
n
Flow length, L ft 0
T = L / (3600*V) hrs 0.00 = 0.00

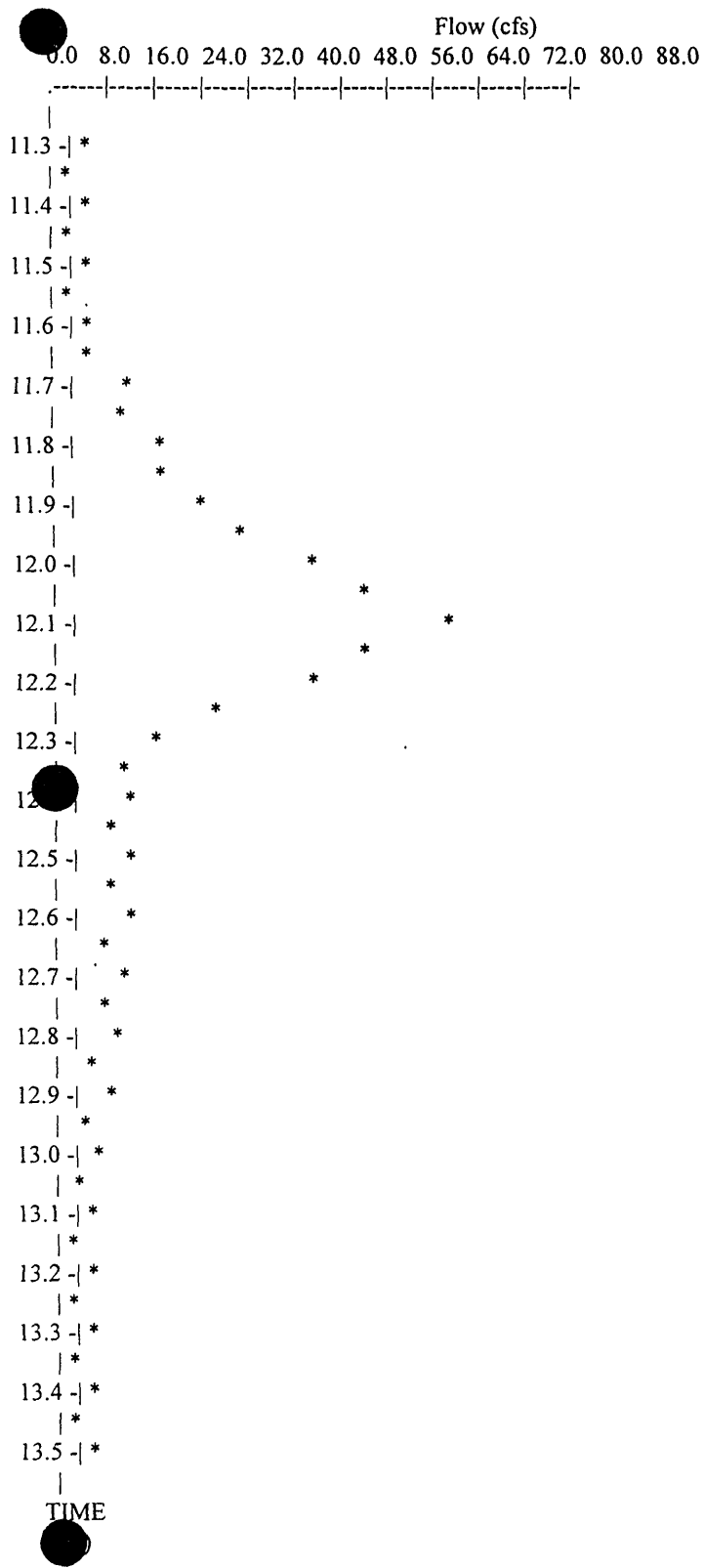
.....
TOTAL TIME (hrs) 0.13

Quick TR-55 Version: 5.46 S/N:
Plotted: 06-04-1996 10:32:00



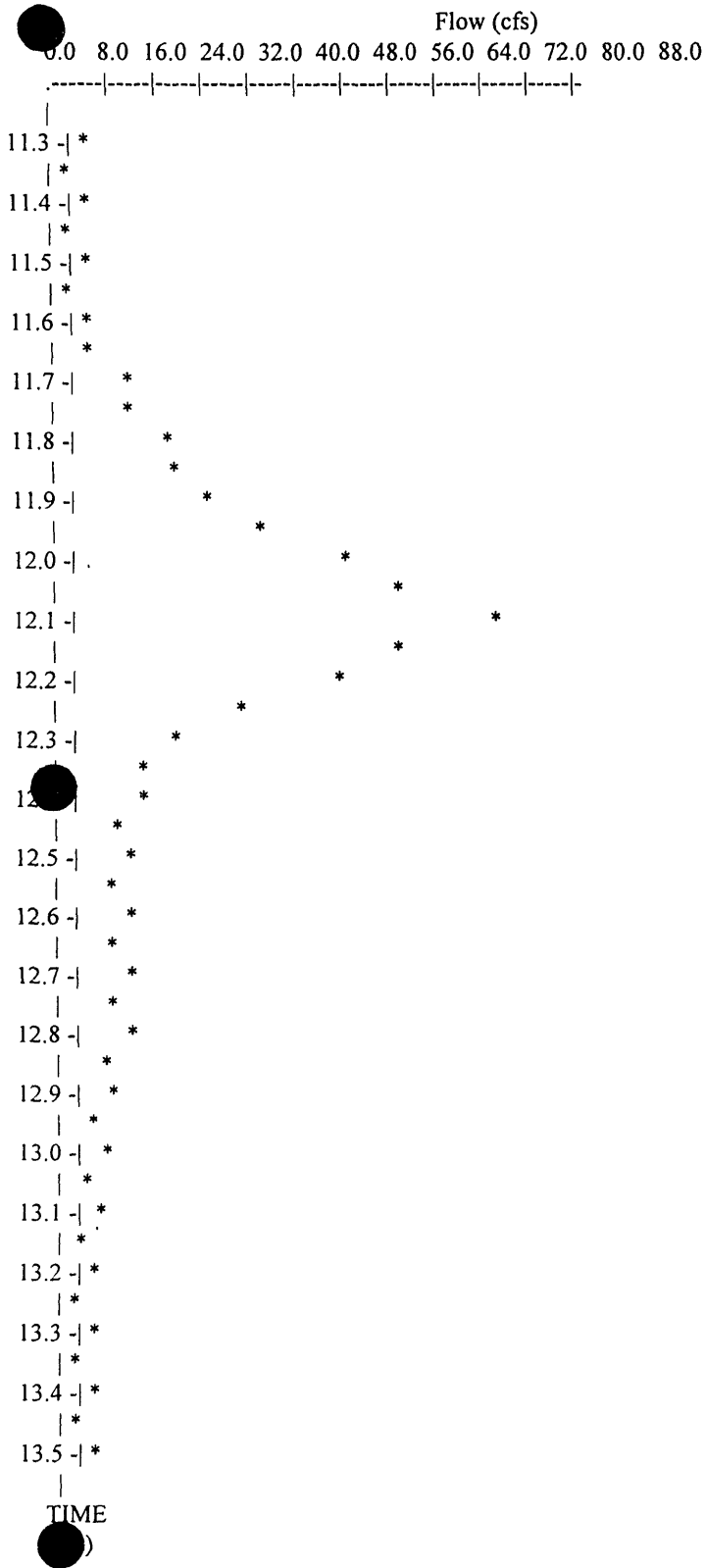
* File: c:\pondpack\DEV-5 .HYD Qmax = 59.0 cfs

Quick TR-55 Version: 5.46 S/N:
Plotted: 06-04-1996 10:31:37



* File: c:\pondpack\DEV-10 .HYD Qmax = 75.0 cfs

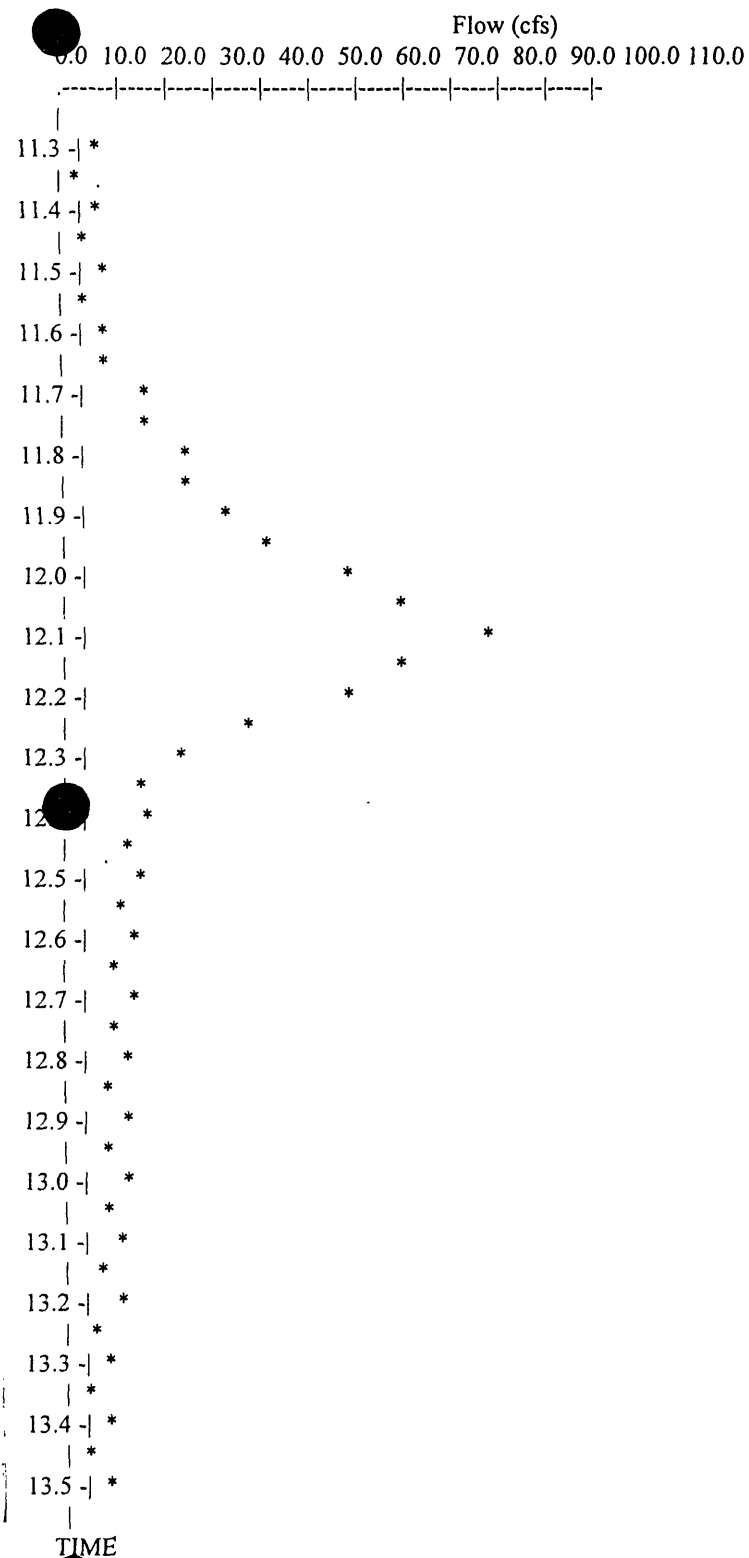
Quick TR-55 Version: 5.46 S/N:
Plotted: 06-04-1996 10:31:06



* File: c:\pondpack\DEV-25 .HYD Qmax = 84.0 cfs

Quick TR-55 Version: 5.46 S/N:

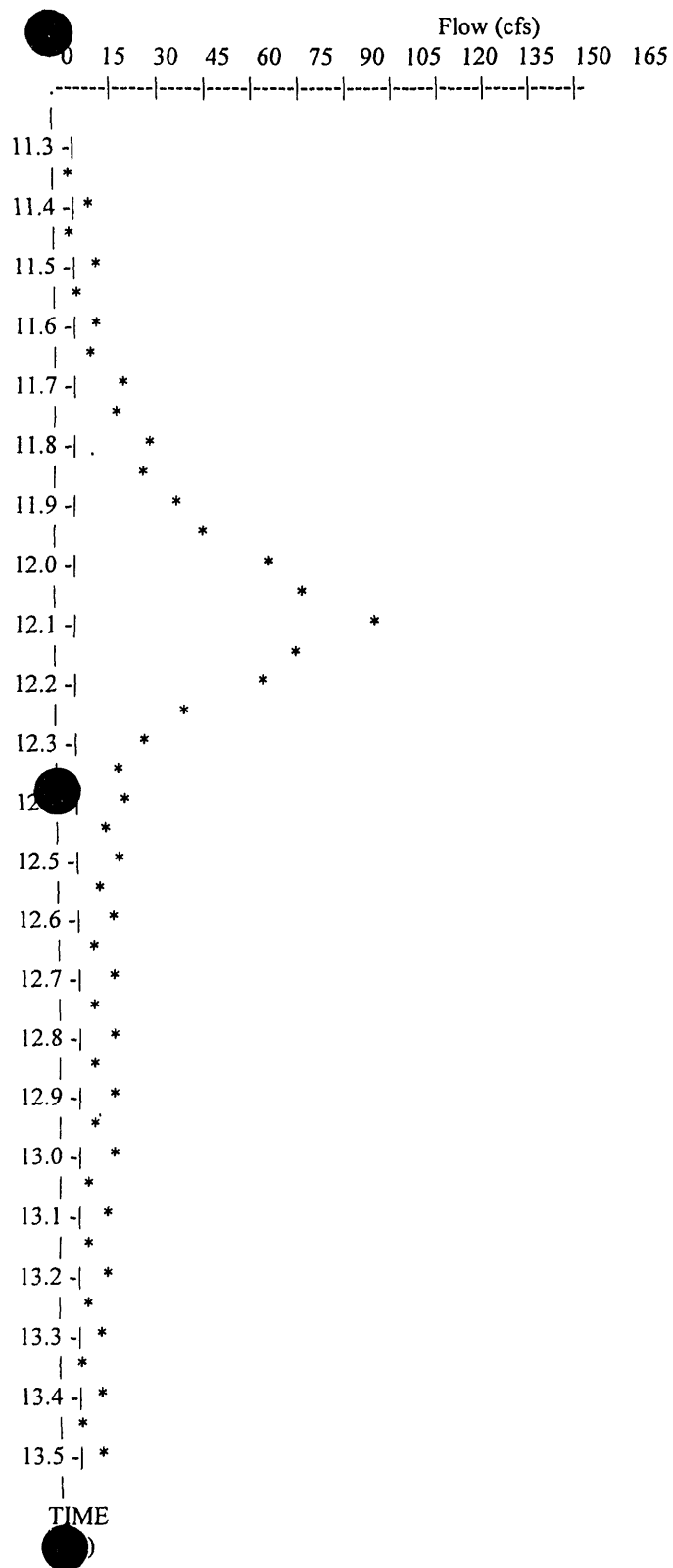
Plotted: 06-04-1996 10:30:36



* File: c:\pondpack\DEV-50 .HYD Qmax = 99.0 cfs

Quick TR-55 Version: 5.46 S/N:

Plotted: 06-04-1996 10:30:08



* File: c:\pondpack\DEV-100 .HYD Qmax = 109.0 cfs

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies

Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.88	98.0	0.10	0.00	4.50	4.26	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	4.50	4.26	1.01 .10
3-rubb bldg	0.45	94.0	0.10	0.00	4.50	3.82	1.03 .10
4-east parking	1.32	87.0	0.10	0.00	4.50	3.10	1.07 .10
5-so.parking	0.94	92.0	0.10	0.00	4.50	3.60	1.04 .10
6-north parking	0.82	93.0	0.10	0.00	4.50	3.71	1.03 .10
7-west parking	1.00	89.0	0.10	0.00	4.50	3.30	1.05 .10
8-northwest cor	1.11	88.0	0.10	0.00	4.50	3.20	1.06 .10
9-west side	1.23	76.0	0.10	0.00	4.50	2.13	1.14 .14

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.58 acres or 0.01653 sq.mi

Peak discharge = 59 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated (Yes/No)	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)		
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-parking	0.10	0.00	**	**	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.10	0.00	**	**	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	Yes	--

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	19	12.1
2-warehouse blg	6	12.1
3-rubb bldg	3	12.1
4-east parking	6	12.1
5-so.parking	5	12.1
6-north parking	5	12.1
7-west parking	5	12.1
8-northwest cor	6	12.1
9-west side	4	12.1
Composite Watershed	59	12.1

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	0	1	1	6	12	19	12	4	3
2-warehouse blg	0	0	0	2	4	6	3	1	1
3-rubb bldg	0	0	0	1	2	3	2	1	0
4-east parking	0	0	0	2	4	6	4	1	1
5-so.parking	0	0	0	2	3	5	3	1	1
6-north parking	0	0	0	2	3	5	3	1	1
7-west parking	0	0	0	2	3	5	3	1	1
8-northwest cor	0	0	0	2	4	6	3	1	1
9-west side	0	0	0	1	3	4	2	1	1
Total (cfs)	0	1	1	20	38	59	35	12	10

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	2	2	2	1	1	1	1	1	1
2-warehouse blg	1	1	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	0	0	0	0	0	0
5-so.parking	1	1	0	0	0	0	0	0	0
6-north parking	1	0	0	0	0	0	0	0	0
7-west parking	1	1	0	0	0	0	0	0	0
8-northwest cor	1	1	0	0	0	0	0	0	0
9-west side	1	0	0	0	0	0	0	0	0
Total (cfs)	9	7	3	1	1	1	1	1	1

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	0	0	0	0	0
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	0	0	0	0	0

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	0	14.8	1
11.1	0	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	0
11.6	1	15.4	0
11.7	7	15.5	0
11.8	14	15.6	0
11.9	20	15.7	0
12.0	38	15.8	0
12.1	59	15.9	0
12.2	35	16.0	0
12.3	12	16.1	0
12.4	10	16.2	0
12.5	9	16.3	0
12.6	7	16.4	0
12.7	3	16.5	0
12.8	1	16.6	0
12.9	1	16.7	0
13.0	1	16.8	0
13.1	1	16.9	0
13.2	1	17.0	0
13.3	1	17.1	0
13.4	1	17.2	0
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 5 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-5.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.88	98.0	0.10	0.00	5.50	5.26	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	5.50	5.26	1.01 .10
3-rubb bldg	0.45	94.0	0.10	0.00	5.50	4.80	1.02 .10
4-east parking	1.32	87.0	0.10	0.00	5.50	4.04	1.05 .10
5-so.parking	0.94	92.0	0.10	0.00	5.50	4.58	1.03 .10
6-north parking	0.82	93.0	0.10	0.00	5.50	4.69	1.03 .10
7-west parking	1.00	89.0	0.10	0.00	5.50	4.25	1.04 .10
8-northwest cor	1.11	88.0	0.10	0.00	5.50	4.15	1.05 .10
9-west side	1.23	76.0	0.10	0.00	5.50	2.95	1.11 .11

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.58 acres or 0.01653 sq.mi

Peak discharge = 75 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-parking	0.10	0.00	**	**	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.10	0.00	**	**	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	Yes	--

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies

Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	24	12.1
2-warehouse blg	7	12.1
3-rubb bldg	3	12.1
4-east parking	8	12.1
5-so.parking	7	12.1
6-north parking	6	12.1
7-west parking	7	12.1
8-northwest cor	7	12.1
9-west side	6	12.1
Composite Watershed	75	12.1

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	8	15	24	15	5	3
2-warehouse blg	0	0	0	2	4	7	4	1	1
3-rubb bldg	0	0	0	1	2	3	2	1	0
4-east parking	0	0	0	3	5	8	5	2	1
5-so.parking	0	0	0	2	4	7	4	1	1
6-north parking	0	0	0	2	4	6	4	1	1
7-west parking	0	0	0	2	4	7	4	1	1
8-northwest cor	0	0	0	2	5	7	5	2	1
9-west side	0	0	0	2	4	6	4	1	1
Total (cfs)	1	1	1	24	47	75	47	15	10

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	3	2	2	2	2	1	1	1	1
2-warehouse blg	1	1	1	1	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	0	0	0	0
5-so.parking	1	1	1	1	0	0	0	0	0
6-north parking	1	1	1	0	0	0	0	0	0
7-west parking	1	1	1	1	0	0	0	0	0
8-northwest cor	1	1	1	1	0	0	0	0	0
9-west side	1	1	0	0	0	0	0	0	0
Total (cfs)	10	9	8	7	3	1	1	1	1

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies

Developed

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	0	0	0
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	0	0	0

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies

Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	9	15.5	1
11.8	16	15.6	1
11.9	24	15.7	1
12.0	47	15.8	1
12.1	75	15.9	1
12.2	47	16.0	1
12.3	15	16.1	1
12.4	10	16.2	1
12.5	10	16.3	0
12.6	9	16.4	0
12.7	8	16.5	0
12.8	7	16.6	0
12.9	5	16.7	0
13.0	3	16.8	0
13.1	2	16.9	0
13.2	1	17.0	0
13.3	1	17.1	0
13.4	1	17.2	0
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 10 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-10.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42
Watershed file: --> C:\PONDPACK\ .MOP
Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.88	98.0	0.10	0.00	6.00	5.76	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	6.00	5.76	1.01 .10
3-rubb bldg	0.45	94.0	0.10	0.00	6.00	5.30	1.02 .10
4-east parking	1.32	87.0	0.10	0.00	6.00	4.52	1.05 .10
5-so.parking	0.94	92.0	0.10	0.00	6.00	5.07	1.03 .10
6-north parking	0.82	93.0	0.10	0.00	6.00	5.18	1.03 .10
7-west parking	1.00	89.0	0.10	0.00	6.00	4.74	1.04 .10
8-northwest cor	1.11	88.0	0.10	0.00	6.00	4.63	1.05 .10
9-west side	1.23	76.0	0.10	0.00	6.00	3.38	1.11 .11

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.58 acres or 0.01653 sq.mi
Peak discharge = 84 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-so.parking	0.10	0.00	**	**	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.10	0.00	**	**	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	Yes	--

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	26	12.1
2-warehouse blg	8	12.1
3-rubb bldg	4	12.1
4-east parking	9	12.1
5-so.parking	8	12.1
6-north parking	7	12.1
7-west parking	7	12.1
8-northwest cor	8	12.1
9-west side	7	12.1
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Composite Watershed	84	12.1

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies

Developed

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	9	17	26	16	6	4
2-warehouse blg	0	0	0	2	5	8	5	2	1
3-rubb bldg	0	0	0	1	2	4	2	1	1
4-east parking	0	0	0	3	6	9	6	2	1
5-so.parking	0	0	0	2	5	8	5	2	1
6-north parking	0	0	0	2	4	7	4	1	1
7-west parking	0	0	0	2	5	7	5	2	1
8-northwest cor	0	0	0	3	5	8	5	2	1
9-west side	0	0	0	2	4	7	4	1	1
Total (cfs)	1	1	1	26	53	84	52	19	12

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	3	3	2	2	2	1	1	1	1
2-warehouse blg	1	1	1	1	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	1	0	0	0
5-so.parking	1	1	1	1	0	0	0	0	0
6-north parking	1	1	1	1	0	0	0	0	0
7-west parking	1	1	1	1	0	0	0	0	0
8-northwest cor	1	1	1	1	1	0	0	0	0
9-west side	1	1	1	1	0	0	0	0	0
Total (cfs)	10	10	9	9	4	2	1	1	1

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	1	1	0
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	0

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	0	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	0	0	0	0	0

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies

Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	9	15.5	1
11.8	18	15.6	1
11.9	26	15.7	1
12.0	53	15.8	1
12.1	84	15.9	1
12.2	52	16.0	1
12.3	19	16.1	1
12.4	12	16.2	1
12.5	10	16.3	1
12.6	10	16.4	1
12.7	9	16.5	1
12.8	9	16.6	1
12.9	6	16.7	1
13.0	4	16.8	1
13.1	3	16.9	1
13.2	2	17.0	1
13.3	2	17.1	1
13.4	1	17.2	1
13.5	1	17.3	0
13.6	1	17.4	0
13.7	1	17.5	0
13.8	1	17.6	0
13.9	1	17.7	0
14.0	1	17.8	0
14.1	1	17.9	0
14.2	1	18.0	0
14.3	1	18.1	0
14.4	1	18.2	0
14.5	1	18.3	0

14.6	1	18.4	0
14.7	1	18.5	0

Return Frequency: 25 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-25.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42
Watershed file: --> C:\PONDPACK\ .MOP
Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff Ia/p input/used
1-main bldg	2.88	98.0	0.10	0.00	7.00	6.76 1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	7.00	6.76 1.01 .10
3-rubb bldg	0.45	94.0	0.10	0.00	7.00	6.29 1.02 .10
4-east parking	1.32	87.0	0.10	0.00	7.00	5.48 1.04 .10
5-so.parking	0.94	92.0	0.10	0.00	7.00	6.05 1.02 .10
6-north parking	0.82	93.0	0.10	0.00	7.00	6.17 1.02 .10
7-west parking	1.00	89.0	0.10	0.00	7.00	5.71 1.04 .10
8-northwest cor	1.11	88.0	0.10	0.00	7.00	5.59 1.04 .10
9-west side	1.23	76.0	0.10	0.00	7.00	4.26 1.09 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.58 acres or 0.01653 sq.mi
Peak discharge = 99 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No) Ia/p Messages
1-main bldg	0.10	0.00	**	**	No Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No Computed Ia/p < .1
5-so.parking	0.10	0.00	**	**	No Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No Computed Ia/p < .1
7-west parking	0.10	0.00	**	**	No Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	No Computed Ia/p < .1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	31	12.1
2-warehouse blg	9	12.1
3-rubb bldg	4	12.1
4-east parking	11	12.1
5-so.parking	9	12.1
6-north parking	8	12.1
7-west parking	9	12.1
8-northwest cor	10	12.1
9-west side	8	12.1
-----	-----	-----
Composite Watershed	99	12.1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	2	10	20	31	19	7	4
2-warehouse blg	0	0	0	3	6	9	6	2	1
3-rubb bldg	0	0	0	1	3	4	3	1	1
4-east parking	0	0	1	4	7	11	7	2	2
5-so.parking	0	0	0	3	6	9	6	2	1
6-north parking	0	0	0	3	5	8	5	2	1
7-west parking	0	0	0	3	6	9	6	2	1
8-northwest cor	0	0	1	3	6	10	6	2	1
9-west side	0	0	0	3	5	8	5	2	1
Total (cfs)	1	1	4	33	64	99	63	22	13

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	4	3	3	2	2	2	2	1	1
2-warehouse blg	1	1	1	1	1	0	0	0	0
3-rubb bldg	1	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	1	1	1	0
5-so.parking	1	1	1	1	1	1	0	0	0
6-north parking	1	1	1	1	1	0	0	0	0
7-west parking	1	1	1	1	1	1	0	0	0
8-northwest cor	1	1	1	1	1	1	0	0	0
9-west side	1	1	1	1	1	0	0	0	0
Total (cfs)	12	10	10	9	9	6	3	2	1

Return Frequency: 50 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	1	1	1
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	1	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	1	0	0	0	0

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	2	15.2	1
11.5	3	15.3	1
11.6	4	15.4	1
11.7	14	15.5	1
11.8	23	15.6	1
11.9	33	15.7	1
12.0	64	15.8	1
12.1	99	15.9	1
12.2	63	16.0	1
12.3	22	16.1	1
12.4	13	16.2	1
12.5	12	16.3	1
12.6	10	16.4	1
12.7	10	16.5	1
12.8	9	16.6	1
12.9	9	16.7	1
13.0	9	16.8	1
13.1	7	16.9	1
13.2	6	17.0	1
13.3	4	17.1	1
13.4	3	17.2	1
13.5	3	17.3	1
13.6	2	17.4	1
13.7	2	17.5	1
13.8	1	17.6	1
13.9	1	17.7	1
14.0	1	17.8	1
14.1	1	17.9	1
14.2	1	18.0	1
14.3	1	18.1	1
14.4	1	18.2	1
14.5	1	18.3	1

14.6	1	18.4	1
14.7	1	18.5	0

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42
Watershed file: --> C:\PONDPACK\ .MOP
Hydrograph file: --> C:\PONDPACK\DEV-50.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies

Developed

.>>>>> Input Parameters Used to Compute Hydrograph <<<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main bldg	2.88	98.0	0.10	0.00	7.50	7.26	1.01 .10
2-warehouse blg	0.83	98.0	0.10	0.00	7.50	7.26	1.01 .10
3-rubb bldg	0.45	94.0	0.10	0.00	7.50	6.78	1.02 .10
4-east parking	1.32	87.0	0.10	0.00	7.50	5.96	1.04 .10
5-so.parking	0.94	92.0	0.10	0.00	7.50	6.55	1.02 .10
6-north parking	0.82	93.0	0.10	0.00	7.50	6.67	1.02 .10
7-west parking	1.00	89.0	0.10	0.00	7.50	6.20	1.03 .10
8-northwest cor	1.11	88.0	0.10	0.00	7.50	6.08	1.04 .10
9-west side	1.23	76.0	0.10	0.00	7.50	4.71	1.08 .10

* Travel time from subarea outfall to composite watershed outfall point.

I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 10.58 acres or 0.01653 sq.mi

Peak discharge = 109 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<<

Subarea Description	Input Values		Rounded Values		Ia/p	
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	Ia/p Messages
1-main bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
2-warehouse blg	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
3-rubb bldg	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
5-parking	0.10	0.00	**	**	No	Computed Ia/p < .1
6-north parking	0.10	0.00	**	**	No	Computed Ia/p < .1
7-west parking	0.10	0.00	**	**	No	Computed Ia/p < .1
8-northwest cor	0.10	0.00	**	**	No	Computed Ia/p < .1
9-west side	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main bldg	33	12.1
2-warehouse blg	10	12.1
3-rubb bldg	5	12.1
4-east parking	12	12.1
5-so.parking	10	12.1
6-north parking	9	12.1
7-west parking	10	12.1
8-northwest cor	11	12.1
9-west side	9	12.1
Composite Watershed	109	12.1

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies

Developed

Composite Hydrograph Summary (cfs)

Subarea	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	2	11	21	33	21	7	5
2-warehouse blg	0	0	0	3	6	10	6	2	1
3-rubb bldg	0	0	0	2	3	5	3	1	1
4-east parking	0	0	1	4	8	12	8	3	2
5-so.parking	0	0	1	3	6	10	6	2	1
6-north parking	0	0	0	3	6	9	5	2	1
7-west parking	0	0	1	3	6	10	6	2	1
8-northwest cor	0	0	1	4	7	11	7	2	2
9-west side	0	0	0	3	6	9	6	2	1
Total (cfs)	1	1	6	36	69	109	68	23	15

Subarea	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	4	3	3	2	2	2	2	1	
2-warehouse blg	1	1	1	1	1	1	0	0	0
3-rubb bldg	1	0	0	0	0	0	0	0	0
4-east parking	2	1	1	1	1	1	1	1	1
5-so.parking	1	1	1	1	1	1	0	0	0
6-north parking	1	1	1	1	1	0	0	0	0
7-west parking	1	1	1	1	1	1	0	0	0
8-northwest cor	1	1	1	1	1	1	1	0	0
9-west side	1	1	1	1	1	1	0	0	0
Total (cfs)	13	10	10	9	9	8	4	3	2

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies
Developed

Composite Hydrograph Summary (cfs)

Subarea	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5
Description	hr	hr	hr	hr	hr	hr	hr	hr	hr
1-main bldg	1	1	1	1	1	1	1	1	1
2-warehouse blg	0	0	0	0	0	0	0	0	0
3-rubb bldg	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
6-north parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
8-northwest cor	0	0	0	0	0	0	0	0	0
9-west side	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea	18.0	19.0	20.0	22.0	26.0
Description	hr	hr	hr	hr	hr
1-main bldg	1	0	0	0	0
2-warehouse blg	0	0	0	0	0
3-rubb-bldg	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
6-north parking	0	0	0	0	0
7-west parking	0	0	0	0	0
8-northwest cor	0	0	0	0	0
9-west side	0	0	0	0	0
Total (cfs)	1	0	0	0	0

Return Frequency: 100 years

TR-55 TABULAR HYDROGRAPH METHOD

Type II. Distribution

(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42

Watershed file: --> C:\PONDPACK\ .MOP

Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
11.0	1	14.8	1
11.1	1	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	3	15.2	1
11.5	4	15.3	1
11.6	6	15.4	1
11.7	16	15.5	1
11.8	26	15.6	1
11.9	36	15.7	1
12.0	69	15.8	1
12.1	109	15.9	1
12.2	68	16.0	1
12.3	23	16.1	1
12.4	15	16.2	1
12.5	13	16.3	1
12.6	10	16.4	1
12.7	10	16.5	1
12.8	9	16.6	1
12.9	9	16.7	1
13.0	9	16.8	1
13.1	8	16.9	1
13.2	8	17.0	1
13.3	6	17.1	1
13.4	4	17.2	1
13.5	4	17.3	1
13.6	3	17.4	1
13.7	2	17.5	1
13.8	2	17.6	1
13.9	2	17.7	1
14.0	1	17.8	1
14.1	1	17.9	1
14.2	1	18.0	1
14.3	1	18.1	1
14.4	1	18.2	1
14.5	1	18.3	1

14.6	1	18.4	1
14.7	1	18.5	0

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 06-04-1996 10:22:42
Watershed file: --> C:\PONDPACK\ .MOP
Hydrograph file: --> C:\PONDPACK\DEV-100.HYD

ECTS _ Scenic Technologies
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0	24.0	0
20.3	0	24.1	0
20.4	0	24.2	0
20.5	0	24.3	0
20.6	0	24.4	0
20.7	0	24.5	0
20.8	0	24.6	0
20.9	0	24.7	0
21.0	0	24.8	0
21.1	0	24.9	0
21.2	0	25.0	0
21.3	0	25.1	0
21.4	0	25.2	0
21.5	0	25.3	0
21.6	0	25.4	0
21.7	0	25.5	0
21.8	0	25.6	0
21.9	0	25.7	0
22.0	0	25.8	0
22.1	0	25.9	0
22.2	0		
22.3	0		

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SITE DRAINAGE REPORT

FOR

BUILDING EXPANSION

AT

TEMPLE HILL ROAD
NEW WINDSOR, ORANGE COUNTY, NEW YORK

PREPARED FOR

ECTS - SCENIC TECHNOLOGIES, INC.

August 27, 1996
WCS NO. 95003

1.0 INTRODUCTION

ECTS - Scenic Technologies, Inc. plans to occupy the former Insulpane/Boss Glass site on Temple Hill Road, New Windsor, Orange County, New York. The 9.54 acre site has two existing buildings, 125,600 sf and 36,000 sf in size. A 10,400 sf portable building will be added as part of this development. Aside from the site for the portable building the main change from existing condition is the development of paved parking areas.

The existing site has an approved site plan with drainage shown, approval dated 6/11/86, prepared by Patrick Kennedy, L.S. This site plan does not reflect two 50 ft x 75 ft additions to the main building which were added without required approvals.

The purpose of this report is to evaluate the existing and developed drainage quantities for use in an ongoing area wide storm drainage study by others.

2.0 SOILS

The soils at the site as identified by the Soils Conservation Service are Erie A & B, a gravelly silt loam. For purposes of computing runoff the Erie soil has a hydrologic group rating of C.

The topography of the site consists basically of flat planes running north - south. The site is level east to west but rapidly drops approximately 11 ft. forming a second plane to the west. Drainage runs towards the northwest corner of the site.

3.0 STORM WATER ANALYSIS

Storm water runoff was computed using Haestad Methods version of the Soils Conservation Services' TR55 computer program. Runoff curve numbers and 24 hour rainfall data was taken from the Soils Conservation Services' "New York Guidelines for Urban Erosion and Sediment Control".

For both the existing and developed conditions storm hydrographs were created for 5, 10, 25, 50 and 100 year storms. The peak flows for these storms are shown below and the tabular and plotted hydrographs are included in the appendix.

4.0 SITE DRAINAGE STRUCTURES

In order to maintain pre-development (i.e. pre-ECTS Scenic Technologies) runoff for the 25 year storm event a detention pond has been created out of the west parking lot. This pond which will hold up to 0.2 acre feet of runoff will maintain 25 year storm runoff at or below the calculated rate of 18 cfs. A small additional amount of detention volume can be acquired by utilizing the drainage pipe as a storage device and adding a flow control gate at catch basin CB7.

PEAK FLOW TABLE

(values in cfs)

	<u>Existing Conditions</u>	<u>Developed Conditions</u>	<u>Change</u>
5 Year Storm	6	11	5
10 Year Storm	12	21	9
25 Year Storm	18	31	13
50 Year Storm	13	22	9
100 Year Storm	17	30	13

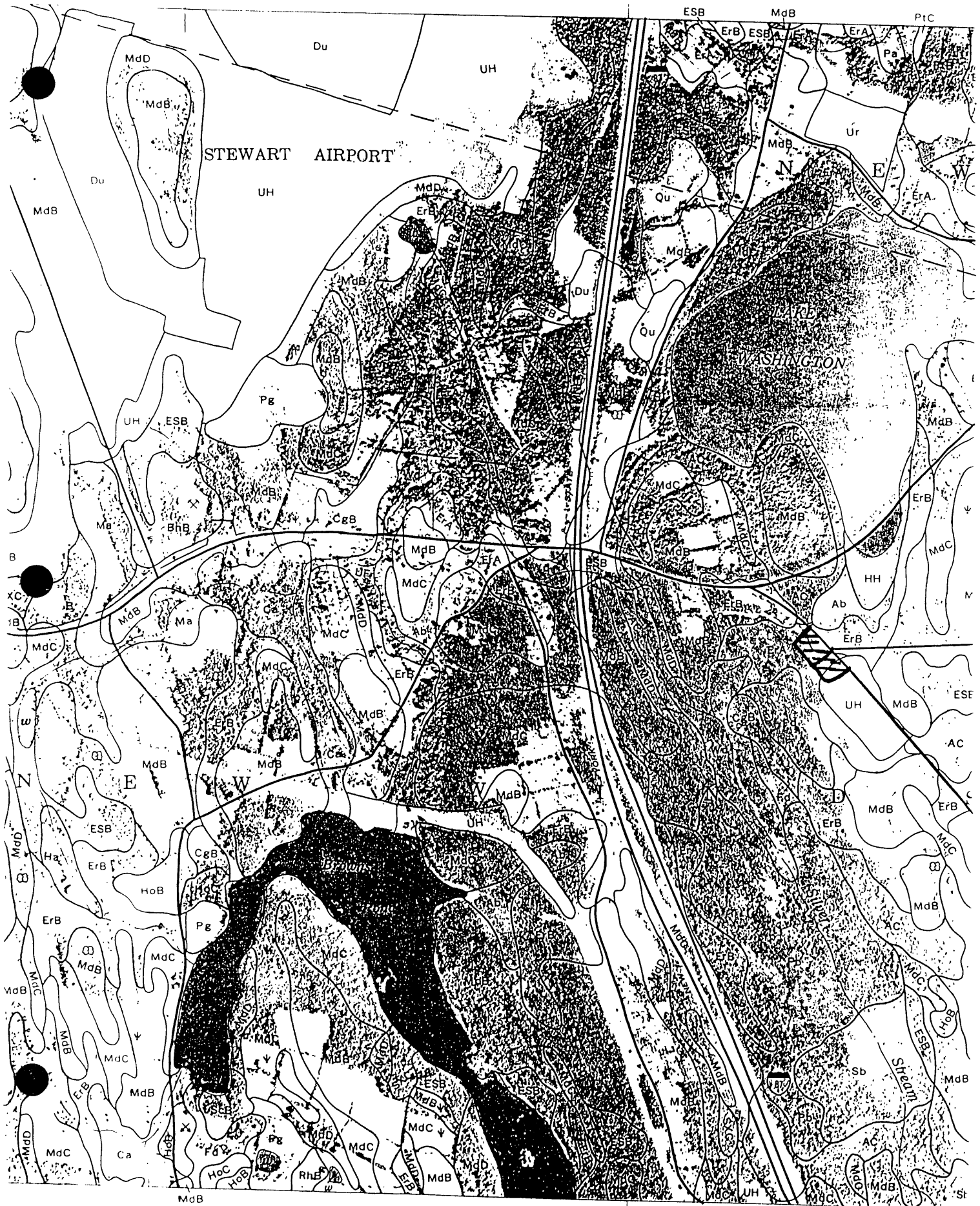


TABLE 17.--SOIL AND WATER FEATURES

[The definitions of "flooding" and "water table" in the Glossary explain terms such as "rare," "brief," "apparent," and "d." The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern]

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness		Uncoated steel	Concrete
					<u>Ft</u>			<u>In</u>				
Ab, AC*----- Alden	D	None-----	---	---	0-0.5	Perched	Nov-Jun	>60	---	High-----	High-----	Low.
AdA, AdB----- Allard	B	None-----	---	---	>6.0	---	---	>60	---	High-----	Low-----	Moderate.
ANC*, AND*, ANF*: Arnot-----	C/D	None-----	---	---	1.0-1.5	Perched	Apr-May	10-20	Hard	Moderate	Low-----	High.
Lordstown-----	C	None-----	---	---	>6.0	---	---	20-40	Hard	Moderate	Low-----	High.
Ba----- Barbour	B	Occasional	Brief to long.	Dec-Apr	3.0-6.0	Apparent	Jan-Apr	>60	---	Moderate	Low-----	Moderate.
Be----- Basher	B	Occasional	Brief to long.	Dec-Apr	1.5-2.0	Apparent	Jan-May	>60	---	High-----	Moderate	Moderate.
BnB*, BnC*: Bath-----	C	None-----	---	---	2.0-4.0	Perched	Nov-Mar	48-60	Hard	Moderate	Moderate	Moderate.
Nassau-----	C	None-----	---	---	>6.0	---	---	10-20	Hard	Moderate	Low-----	High.
Ca----- Canandaigua	D	None to rare	---	---	0-0.5	Apparent	Nov-Jun	>60	---	High-----	High-----	Low.
Cd, Ce, Cf----- Carlisle	A/D	Frequent-----	Long-----	Nov-May	0-1.0	Apparent	Sep-Jun	>60	---	High-----	High-----	Low.
CgA, CgB----- Castile	B	None-----	---	---	1.5-2.0	Apparent	Mar-May	>60	---	High-----	Moderate	Moderate.
ChB, ChC----- Charlton	B	None-----	---	---	>6.0	---	---	>60	---	Low-----	Low-----	High.
CLC*, CLD*: Charlton-----	B	None-----	---	---	>6.0	---	---	>60	---	Low-----	Low-----	High.
Paxton-----	C	None-----	---	---	>6.0	---	---	>60	---	Moderate	Low-----	Moderate.
CnA, CnB, CnC----- Chenango	A	None-----	---	---	>6.0	---	---	>60	---	Moderate	Low-----	Moderate.
CoB, CoC, CoD----- Collamer	C	None-----	---	---	1.5-2.0	Apparent	Mar-May	>60	---	High-----	Moderate	Low.
Du*. Dumps												
ErA, ErB----- Erie	C	None-----	---	---	0.5-1.5	Perched	Dec-May	>60	---	High-----	High-----	Low.

See footnote at end of table.

This soil is suited to pasture. Erosion is a hazard if areas are overgrazed or grazed when the soil is wet. Proper stocking, rotation grazing, and restricted grazing in wet periods are needed to maintain pasture seedings and control erosion.

Suitability for timber production is good. Forested areas support such trees as sugar maple, northern red oak, and white ash. Equipment limitation and the hazard of erosion are serious problems. Erosion along skid trails can result in deep gullies that prevent the use of the trails. If logging trails and roads are laid out across the slope, this risk is reduced.

This soil is poorly suited to most urban and recreation uses because of slope. Seasonal wetness, moderately slow permeability and the hazard of frost action are additional limitations for many uses. Walls of excavations for underground utilities and basements tend to slough and cave. Excavation of foot slope areas is hazardous because of the danger of mass slides and slumps.

The capability subclass is IVe.

Du—Dumps. These miscellaneous areas consist mostly of excavations that have been filled or are being filled with refuse and trash. In some areas the refuse is dumped in natural low spots with little accompanying excavation, but more commonly a series of trenches dug by backhoe or bulldozer serve as the dump site. Often the refuse is partly covered or mixed with earthy materi-

The sides of areas are steep, and the floor is nearly level or undulating piles of trash and debris. Areas are mostly irregular or rectangular in shape, depending on topography and ownership boundaries, and are commonly 3 to 15 acres.

The refuse varies widely in degree of decomposition. In some places it is relatively undecomposed. In other areas it is well decomposed or partly burned. In addition to organic wastes, such as garbage, paper, and wood, the refuse commonly contains bottles, cans, wire, slabs of asphalt, bricks, tires, old appliances, and parts of cars. Some areas of decomposing rubbish emit a sulfurlike odor. Rodent infestation is a common problem.

Included in mapping are small pools of water in some of the dumps. In some large areas the soil material covering the debris and rubbish is up to 5 feet thick.

Dumps are generally devoid of vegetation except for scattered bushes and grass in open areas. The earthy floor in excavated areas is often highly compacted, allowing slow infiltration of rainwater. The depth and degree of compaction of the refuse are highly variable.

Abandoned dumps can be difficult to reclaim for farming or timber production. Large quantities of earthy fill and extensive grading are generally needed to adequately landscape areas for tillage and planting. Large amounts of organic matter and fertilizer are needed to make reclaimed areas productive.

Most areas, even if properly landscaped, are not suitable for urban uses because of the hazard of subsidence. Subsidence results from the settling and decom-

position of the buried trashy material. Pungent odors and health hazards can be detrimental for some recreation uses. Onsite investigation is essential to determine the suitability of abandoned dumps for any use.

Pollution of streams, ponds, or ground water by liquid wastes and effluent seeping from dump sites is a hazard in some areas.

No capability subclass is assigned.

ErA—Erie gravelly silt loam, 0 to 3 percent slopes.

This deep, somewhat poorly drained, nearly level soil has a fragipan. It formed in glacial till deposits derived from shale, slate, and sandstone. It occurs as broad, nearly flat hilltops and foot slopes of the uplands. Areas are mainly round or oval and 5 to 10 acres.

Typically the surface layer is dark brown gravelly silt loam 10 inches thick. The subsoil is 46 inches thick. It is mottled grayish brown channery silt loam in the upper 8 inches and is a firm, mottled olive brown channery silt loam fragipan in the lower part. The substratum from 56 to 70 inches is mottled olive brown channery silt loam.

Included with this soil in mapping are small areas of the moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils in a few small depressions. On a few acres there are large stones on the surface.

The seasonal high water table in this Erie soil is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the fragipan and the substratum. Runoff is slow, and available water capacity is moderate to low. Roots are restricted by the dense fragipan to depths of 10 to 24 inches. Natural organic matter content is medium. The soil layers above the pan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas are either idle or pastured. A few are used for hay and cultivated crops.

This soil can be used for cultivated crops but is generally better suited to hay or pasture. Unless the soil is drained, wetness delays planting in spring and often interferes with harvesting in fall. The soil is somewhat difficult to drain because of slow water movement through the fragipan. A combination of subsurface drains, interceptor drains, and open ditch drains is often essential for adequate drainage. Subsurface drains may require backfilling with gravel to be effective. This soil is somewhat more difficult to drain than the gently sloping Erie soil. Minimum tillage, cover crops, and sod crops in the cropping system are needed to preserve soil tilth and maintain organic matter content.

Pasture on this soil is generally fair to good in quality. Grazing in wet periods compacts the soil and destroys desirable grasses. Rotation grazing, proper stocking, lime and fertilizer, and restricted grazing in wet periods are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Forested areas support such trees as black cherry, sugar maple, and northern red oak. Windthrow and seedling mortality are minor hazards because of the restricted root depth. Wetness can be a problem in machine planting of seedlings in spring.

Seasonal wetness and slow or very slow permeability in the fragipan are serious limitations for most urban and recreation uses. Some areas are excellent sites for dugout ponds or small marshes for wetland wildlife.

The capability subclass is IIIw.

ErB—Erie gravelly silt loam, 3 to 8 percent slopes.

This deep, somewhat poorly drained, gently sloping soil has a fragipan. It formed in glacial till deposits derived from shale, slate, and sandstone. It is on foot slopes, on lower hillsides, and along shallow drainageways of the uplands. It commonly receives runoff from higher adjacent soils. Areas are mainly oval and 5 to 20 acres.

Typically the surface layer is dark brown gravelly silt loam 9 inches thick. The subsoil is 45 inches thick. It is mottled grayish brown channery silt loam in the upper 9 inches and a firm, mottled olive brown channery silt loam fragipan in the lower part. The substratum from 54 to 70 inches is mottled olive brown channery silt loam.

Included with this soil in mapping are small areas of the moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils on a few small concave toe slopes. On a few acres there are large stones on the surface.

The water table in this Erie soil is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the pan and substratum. Runoff is medium, and available water capacity is moderate to low. Roots are restricted by the dense pan to depths of 10 to 24 inches. Natural organic matter content is medium. The soil layers above the fragipan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas of this soil are either idle or pastured. A few are used for hay and cultivated crops.

This soil can be used for cultivated crops but is better suited to hay or pasture. Unless the soil is drained, wetness delays planting in spring and often hinders harvesting in fall. This soil is somewhat difficult to drain because of slow water movement through the fragipan. A combination of subsurface drains and interceptor drains is often essential for adequate drainage. Subsurface drains may require backfilling with gravel to be effective. This soil is usually easier to drain than the nearly level Erie soil. Erosion is a hazard, particularly on long slopes and in intensively cultivated areas. Minimum tillage, cover crops, cross slope tillage, and sod crops in the cropping system are needed to preserve tilth, control erosion, and maintain organic matter content.

This soil is fairly well suited to pasture. Grazing in wet periods compacts the soil and destroys desirable grass

species. Rotation grazing, proper stocking, lime and fertilizer, and restricted grazing in wet periods are needed to maintain pasture seedings.

Suitability for timber production is fair to good. Forested areas support such species as black cherry, sugar maple, and northern red oak. Windthrow and seedling mortality are minor hazards because of the restricted root zone. Seasonal wetness can be a problem in machine planting of seedlings in spring.

Seasonal wetness and slow or very slow permeability in the fragipan are serious limitations for most urban and recreation uses. Many areas provide excellent sites for dike ponds.

The capability subclass is IIIw.

ESB—Erie extremely stony soils, gently sloping.

These deep, somewhat poorly drained, gently sloping soils have a fragipan. They formed in glacial till deposits derived from shale, slate, and sandstone. They are on lower hillsides, foot slopes, and hilltops and along shallow drainageways of the uplands. The slope ranges from 3 to 8 percent. Stones and boulders more than 10 inches in diameter and less than 5 feet apart cover the surface. Texture of the surface layer, excluding large stones, is gravelly silt loam, gravelly loam, or gravelly fine sandy loam. Areas are mostly round and 5 to 15 acres.

Typically the surface layer is dark brown gravelly silt loam 4 inches thick. Large stones are at the surface. The subsoil is 46 inches thick. It is mottled grayish brown channery silt loam in the upper 14 inches. The lower part is a firm, mottled olive brown fragipan. The substratum from 50 to 70 inches is mottled olive brown channery silt loam.

Included with these soils in mapping are small areas of moderately well drained Mardin soils on slightly higher rises and knolls and very poorly drained Alden soils on a few small concave toe slopes. Some small areas have very few if any large stones on the surface.

The water table is perched above the fragipan in spring and other wet periods. Permeability is moderate in the surface layer and upper part of the subsoil and is slow or very slow in the fragipan and substratum. Runoff is medium. Available water capacity is moderate to low. Roots are restricted by the dense fragipan. Natural organic matter content is medium. The soil layers above the pan are 15 to 35 percent gravel or channery fragments. Unless limed, the surface layer ranges from very strongly acid to medium acid.

Most areas are either idle or forested. A few are unimproved pasture.

These soils are not suited to most cultivated crops or hay because of the large stones on the surface. Drainage is required for optimum crop production if large stones are removed. Where drainage and removal of stones are feasible, cross-slope tillage, cover crops, sod crops in the cropping system, and minimum tillage are needed to maintain tilth and organic matter content and reduce erosion.

Table 10.2a - Runoff Curve Numbers for Urban Areas¹

(Reprinted from: 210-VI-TR-55, Second Ed., June 1986)

Cover Description	Curve numbers for hydrologic soil group				
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc) ³ :					
Poor condition (grass cover < 50%).....		68	79	86	89
Fair condition (grass cover 50% to 75%).....		49	69	79	84
Good condition (grass cover > 75%).....		39	61	74	80
Impervious areas					
Paved: parking lots, roofs, driveways, etc. (excluding right-of-way).....		98	98	98	98
Streets and roads:					
Paved: curbs and storm sewers (excluding right of way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	98
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way).....		72	82	87	89
Western desert urban areas:					
*Natural desert landscape (pervious areas only) ⁴		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with a 1 to 2 inch sand or gravel mulch and basin boarders).....		96	96	96	96
Urban districts:					
Commercial and business..... 85		89	92	94	95
Industrial..... 72		81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)..... 65		77	85	90	92
1/4 acre..... 38		61	75	83	87
1/3 acre..... 30		57	72	81	86
1/2 acre..... 25		54	70	80	85
1 acre..... 20		51	68	79	84
2 acres..... 12		46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in Table 10.2c).					
1Average runoff condition and $I_a = 0.2S$					
2The average percent impervious area shown was used to develop composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious area are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 8.3 or 8.4.					
3CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.					
4Composite CN's for natural desert landscaping should be computed using Figure 8.3 or 8.4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.					
5Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 8.3 or 8.4 based on the degree of development (impervious area percentage) and the CN's for newly graded pervious areas.					

**Table 10.3 - Roughness coefficients
(Manning's n) for sheet flow**

Surface description	n ¹
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover < 20%	0.06
Residue cover > 20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses ²	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods: ³	
Light underbrush	0.40
Dense underbrush	0.80

¹The values are a composite of information compiled by Engman (1980).

²Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.

³When selecting n consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

- (2) constant intensity of rainfall excess (that part of a rain available for runoff),
- (3) rainfall duration of 24 hours, and
- (4) minor effect of infiltration on travel time.

Rainfall depth can be obtained from Exhibit 10.1 at the end of this chapter.

Shallow Concentrated Flow

After a maximum of 300 feet, sheet flow usually becomes shallow concentrated flow. The average velocity for this flow can be determined from Figure 10.10 on page 10.20, in which average velocity is a function of watercourse slope and type of channel. Tillage can affect the direction of shallow concentrated flow. Flow may not always be directly down the watershed slope if tillage runs across the slope.

After determining average velocity in Figure 10.10 on page 10.20, use equation 10.4 to estimate travel time for the shallow concentrated flow segment.

Open Channels

Open channels are assumed to begin where surveyed cross section information has been obtained, where channels are visible on aerial photographs, or where blue lines (indicating streams) appear on United States Geological Survey (USGS) quadrangle sheets. Manning's equation or water surface profile information can be used to estimate average flow velocity. Average flow velocity is usually determined for bank-full elevation.

Manning's equation is

$$V = \frac{1.49 r^{2/3} s^{1/2}}{n} \quad [\text{Eq. 10.7}]$$

where

- V = average velocity (ft/sec),
- r = hydraulic radius (ft) and is equal to a/p_w ,
- a = cross sectional flow area (ft²),
- p_w = wetted perimeter (ft),
- s = slope of the hydraulic grade line (channel slope, ft/ft), and
- n = Manning's roughness coefficient for open channel flow.

Manning's "n" values for open channel flow can be obtained from standard textbooks⁹. After average velocity is computed using equation 10.7, T_t for the channel segment can be estimated using equation 10.4.

Reservoirs or Lakes

Sometimes it is necessary to estimate the velocity of flow through a reservoir or lake at the outlet of a watershed to determine travel time. This travel time is normally very small and can be assumed as zero.

Limitations

- Manning's kinematic solution should not be used for sheet flow longer than 300 feet. Equation 10.6 was developed for use with the four standard rainfall intensity-duration relationships.
- In watersheds with storm sewers, carefully identify the appropriate hydraulic flow path to estimate T_c . Storm sewers generally handle only a small portion of a large event. The rest of the peak flow travels by streets, lawns, and so on, to the outlet. Consult a standard hydraulics textbook to determine average velocity in pipes for either pressure or nonpressure flow.
- The minimum T_c used is 0.1 hour.
- A culvert or bridge can act as a reservoir outlet if there is significant storage behind it. The procedures in TR-55 can be used to determine the peak flow upstream of the culvert. Detailed storage routing procedures should be used to determine the outlet through the culvert.
- Figure 10.11 on page 10.22 provides Worksheet 3 for calculating Time of Concentration (T_c) or travel time (T_t).

Exhibit 10.1

New York Rainfall Maps for Different Rainfall Frequencies

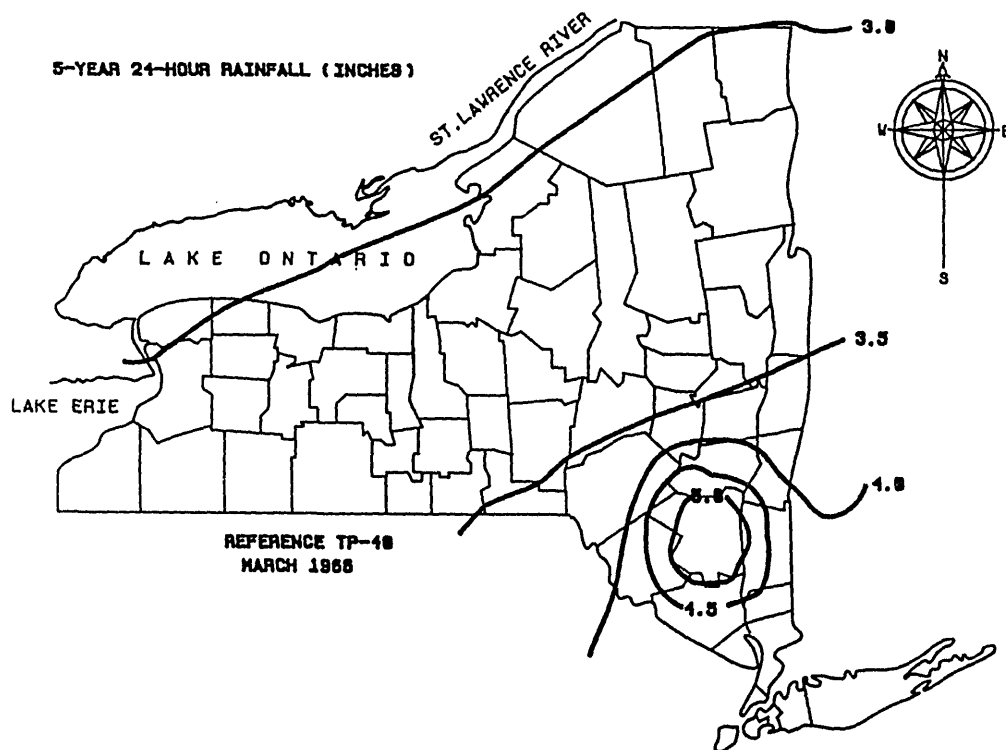
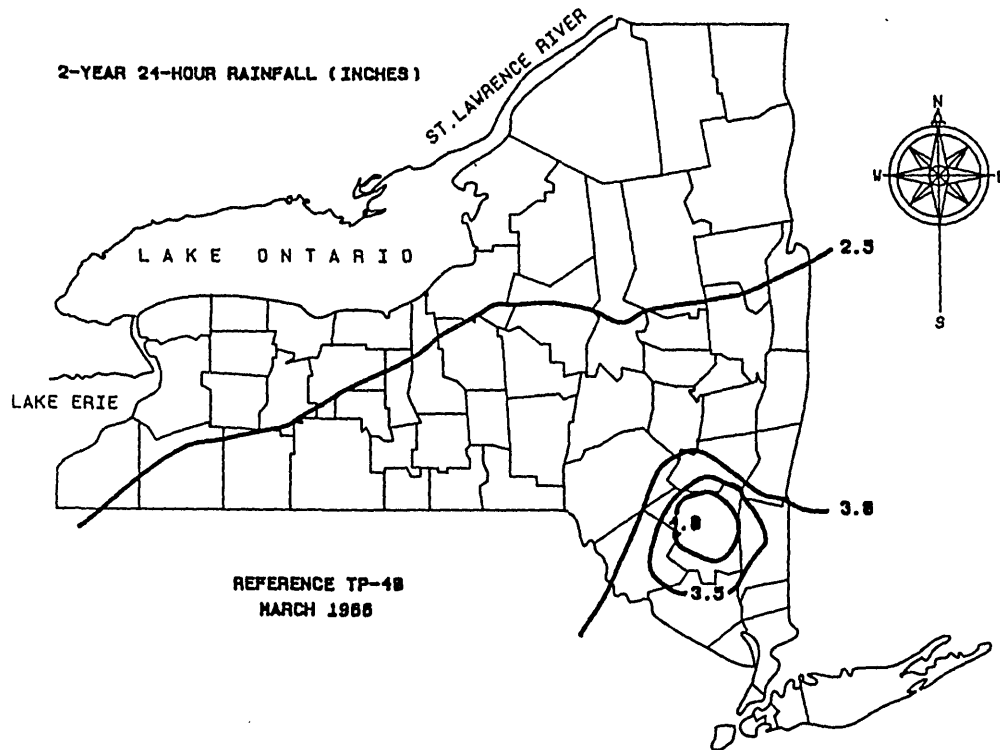


Exhibit 10.1 (cont'd)

New York Rainfall Maps for Different Rainfall Frequencies

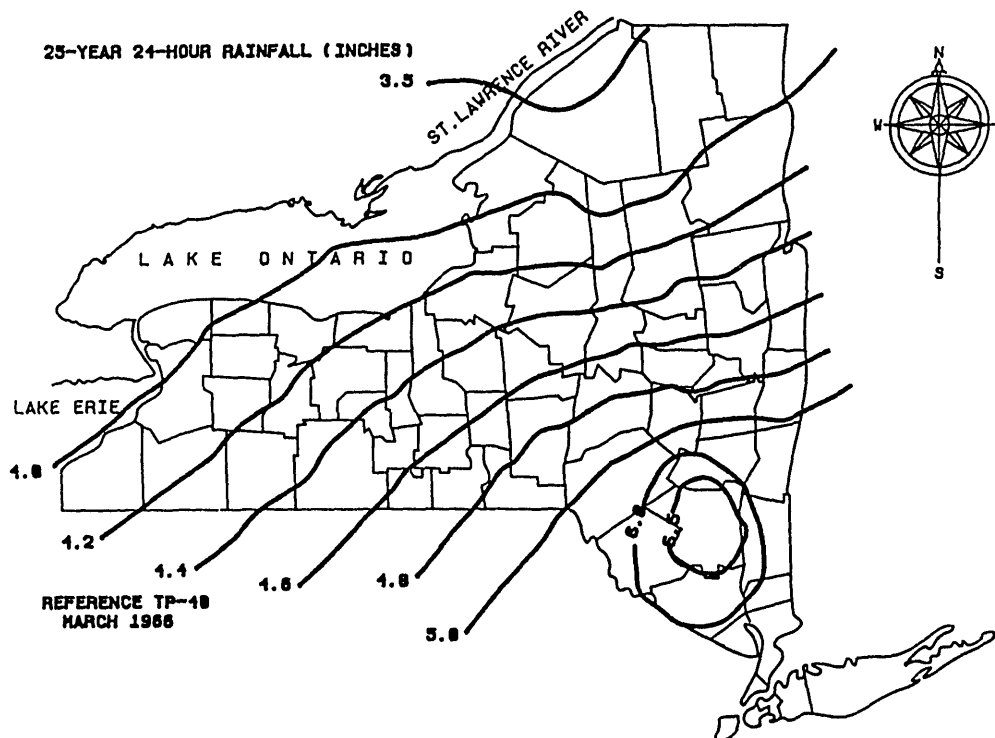
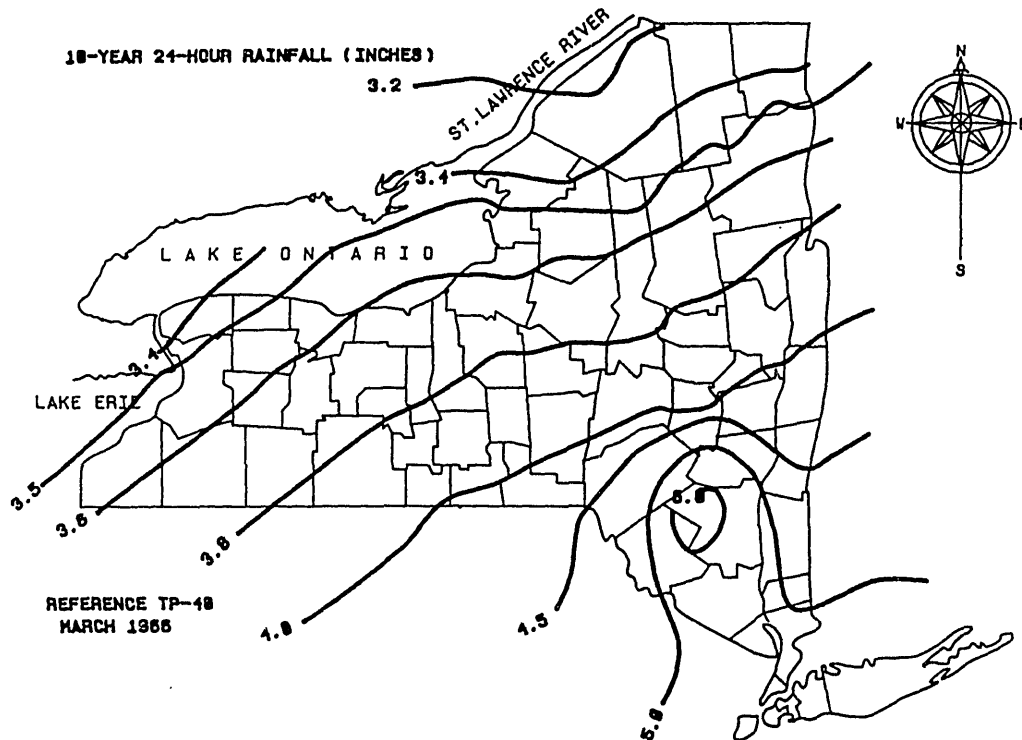
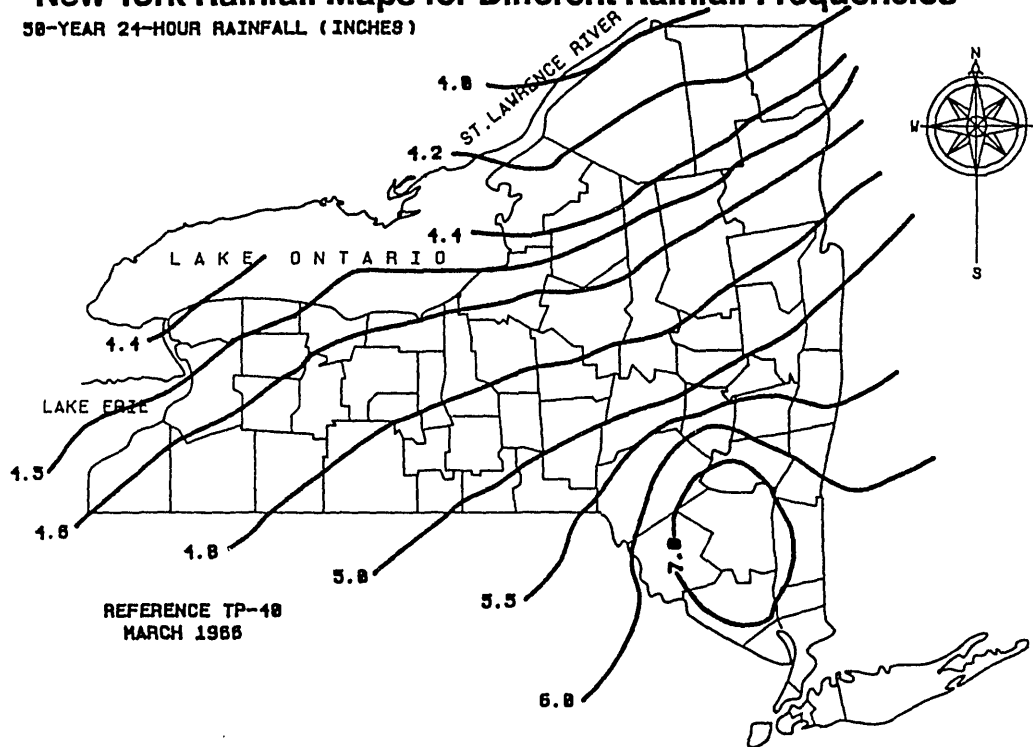


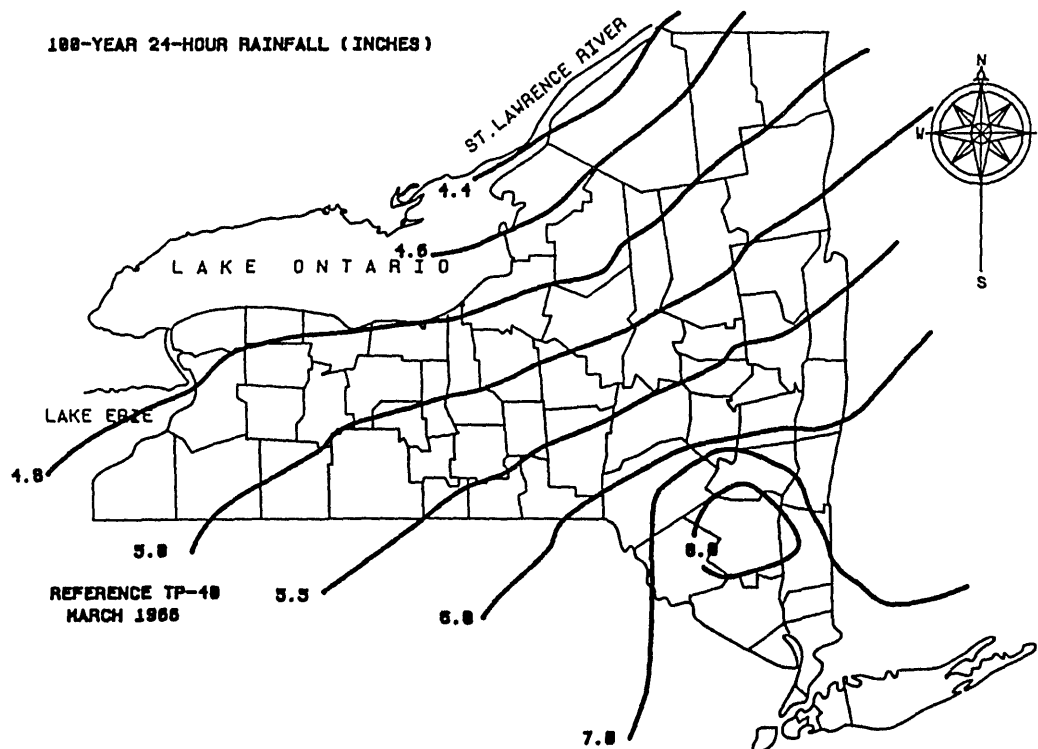
Exhibit 10.1 (cont'd)

New York Rainfall Maps for Different Rainfall Frequencies

50-YEAR 24-HOUR RAINFALL (INCHES)



100-YEAR 24-HOUR RAINFALL (INCHES)



APPENDIX

Quick TR-55 Ver.5.46 S/N:
Executed: 08:51:13 08-27-1996

ECTS-Scenic Technologies
New Windsor Facility
Existing (pre-ECTS)

RUNOFF CURVE NUMBER SUMMARY

.....

Subarea Description	Area (acres)	CN (weighted)
1-main building	2.71	98
3-Rub bldg site	0.45	74
4-east parking	1.31	83
5-so. parking	0.70	80
7-west parking	1.00	74

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ECTS-Scenic Technologies
New Windsor Facility
Existing (pre-ECTS)

RUNOFF CURVE NUMBER DATA

Composite Area: 1-main building

SURFACE DESCRIPTION	AREA	CN
		(acres)
roof	2.71	98
COMPOSITE AREA ---> 2.71 98.0 (98)		

Composite Area: 3-Rub bldg site

SURFACE DESCRIPTION	AREA	CN
		(acres)
C-grass	0.45	74
COMPOSITE AREA ---> 0.45 74.0 (74)		

Composite Area: 4-east parking

SURFACE DESCRIPTION	AREA	CN
		(acres)
paved	0.25	98
C-grass	0.70	74
gravel	0.36	89
COMPOSITE AREA ---> 1.31 82.7 (83)		

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Composite Area: 5-so. parking

SURFACE DESCRIPTION	AREA	CN	(acres)
paved/gravel	0.30	89	
C-grass	0.40	74	
COMPOSITE AREA ---> 0.70 80.4 (80)			

Composite Area: 7-west parking

SURFACE DESCRIPTION	AREA	CN	(acres)
C-grass	1.00	74	
COMPOSITE AREA ---> 1.00 74.0 (74)			

Quick TR-55 Ver.5.46 S/N:
Executed: 11:14:45 08-22-1996 95003\95003E.TCT

SUMMARY SHEET FOR Tc or Tt COMPUTATIONS
(Solved for Time using TR-55 Methods)

95003 ECTS-Scenic Technologies
New Windsor Facility

Subarea descr.	Tc or Tt	Time (hrs)
-----	-----	-----
1-main building	Tc	0.09
3-Rub bldg site	Tc	0.46
4-east parking	Tc	0.25
5-so. parking	Tc	0.25
7-west parking	Tc	0.57

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95003 ECTS-Scenic Technologies
 New Windsor Facility

Tc COMPUTATIONS FOR: 7-west parking

SHEET FLOW (Applicable to Tc only)

Segment ID	7a	
Surface description	grass	
Manning's roughness coeff., n	0.2400	
Flow length, L (total < or = 300)	ft	450.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0800
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2 * s}$		
	hrs	0.44 = 0.44

SHALLOW CONCENTRATED FLOW

Segment ID	7b	
Surface (paved or unpaved)?	Unpaved	
Flow length, L	ft	800.0
Watercourse slope, s	ft/ft	0.0100
	0.5	
Avg.V = Csf * (s)	ft/s	1.6135
where: Unpaved Csf = 16.1345		
Paved Csf = 20.3282		
$T = L / (3600 * V)$		
	hrs	0.14 = 0.14

CHANNEL FLOW

Segment ID		
Cross Sectional Flow Area, a	sq.ft	0.00
Wetted perimeter, Pw	ft	0.00
Hydraulic radius, r = a/Pw	ft	0.000
Channel slope, s	ft/ft	0.0000
Manning's roughness coeff., n		0.0000
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		
	ft/s	0.0000
Flow length, L	ft	0
$T = L / (3600 * V)$		
	hrs	0.00 = 0.00

.....
 TOTAL TIME (hrs) 0.57

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95003 ECTS-Scenic Technologies
 New Windsor Facility

Tc COMPUTATIONS FOR: 5-so. parking

SHEET FLOW (Applicable to Tc only)

Segment ID	5a	
Surface description	paved/grass	
Manning's roughness coeff., n	0.1500	
Flow length, L (total < or = 300)	ft	120.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0800
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2 * s}$		
	hrs	0.10 = 0.10

SHALLOW CONCENTRATED FLOW

Segment ID	5b	
Surface (paved or unpaved)?	Unpaved	
Flow length, L	ft	800.0
Watercourse slope, s	ft/ft	0.0100
	0.5	
Avg.V = Csf * (s)	ft/s	1.6135
where: Unpaved Csf = 16.1345		
Paved Csf = 20.3282		
$T = L / (3600 * V)$		
	hrs	0.14 = 0.14

CHANNEL FLOW

Segment ID	5c	
Cross Sectional Flow Area, a	sq.ft	1.23
Wetted perimeter, Pw	ft	3.93
Hydraulic radius, r = a/Pw	ft	0.313
Channel slope, s	ft/ft	0.0200
Manning's roughness coeff., n		0.0100
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		
	ft/s	9.7135
Flow length, L	ft	260
$T = L / (3600 * V)$		
	hrs	0.01 = 0.01

.....
 TOTAL TIME (hrs) 0.25

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95003 ECTS-Scenic Technologies
 New Windsor Facility

Tc COMPUTATIONS FOR: 4-east parking

SHEET FLOW (Applicable to Tc only)

Segment ID	4a		
Surface description	paved/grass		
Manning's roughness coeff., n	0.1500		
Flow length, L (total < or = 300)	ft	70.0	
Two-yr 24-hr rainfall, P2	in	3.500	
Land slope, s	ft/ft	0.0100	
	0.8		
$T = \frac{.007 * (n*L)}{0.5 * P2 * s}$	hrs	0.15	= 0.15

SHALLOW CONCENTRATED FLOW

Segment ID	4b		
Surface (paved or unpaved)?	Unpaved		
Flow length, L	ft	560.0	
Watercourse slope, s	ft/ft	0.0100	
	0.5		
Avg.V = Csf * (s)	ft/s	1.6135	
where: Unpaved Csf = 16.1345			
Paved Csf = 20.3282			
$T = L / (3600*V)$	hrs	0.10	= 0.10

CHANNEL FLOW

Segment ID			
Cross Sectional Flow Area, a	sq.ft	0.00	
Wetted perimeter, Pw	ft	0.00	
Hydraulic radius, r = a/Pw	ft	0.000	
Channel slope, s	ft/ft	0.0000	
Manning's roughness coeff., n		0.0000	
	$1.49 * r^{2/3} * s^{1/2}$		
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$	ft/s	0.0000	
Flow length, L	ft	0	
$T = L / (3600*V)$	hrs	0.00	= 0.00

.....
 TOTAL TIME (hrs) 0.25

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95003 ECTS-Scenic Technologies
 New Windsor Facility

Tc COMPUTATIONS FOR: 3-Rub bldg site

SHEET FLOW (Applicable to Tc only)

Segment ID	3a	
Surface description	grass	
Manning's roughness coeff., n	0.2400	
Flow length, L (total < or = 300)	ft	400.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0800
	0.8	
$T = \frac{.007 * (n*L)}{0.5 * P2 * s}$		
	hrs	0.40 = 0.40

SHALLOW CONCENTRATED FLOW

Segment ID	3b	
Surface (paved or unpaved)?	Unpaved	
Flow length, L	ft	370.0
Watercourse slope, s	ft/ft	0.0100
	0.5	
Avg.V = Csf * (s)	ft/s	1.6135
where: Unpaved Csf = 16.1345		
Paved Csf = 20.3282		
$T = L / (3600 * V)$		
	hrs	0.06 = 0.06

CHANNEL FLOW

Segment ID		
Cross Sectional Flow Area, a	sq.ft	0.00
Wetted perimeter, Pw	ft	0.00
Hydraulic radius, r = a/Pw	ft	0.000
Channel slope, s	ft/ft	0.0000
Manning's roughness coeff., n		0.0000
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		
	ft/s	0.0000
Flow length, L	ft	0
$T = L / (3600 * V)$		
	hrs	0.00 = 0.00

.....
 TOTAL TIME (hrs) 0.46

Quick TR-55 Ver.5.46 S/N:
 Executed: 11:14:45 08-22-1996 95003\95003E.TCT

95003 ECTS-Scenic Technologies
 New Windsor Facility

Tc COMPUTATIONS FOR: 1-main building

SHEET FLOW (Applicable to Tc only)

Segment ID	1a	
Surface description	roof	
Manning's roughness coeff., n	0.0110	
Flow length, L (total < or = 300)	ft	100.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0800
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2 * s}$		
	hrs	0.01 = 0.01

SHALLOW CONCENTRATED FLOW

Segment ID	1b	
Surface (paved or unpaved)?	Paved	
Flow length, L	ft	600.0
Watercourse slope, s	ft/ft	0.0100
	0.5	
Avg.V = Csf * (s)	ft/s	2.0328
where: Unpaved Csf = 16.1345		
Paved Csf = 20.3282		
$T = L / (3600 * V)$		
	hrs	0.08 = 0.08

CHANNEL FLOW

Segment ID		
Cross Sectional Flow Area, a	sq.ft	0.00
Wetted perimeter, Pw	ft	0.00
Hydraulic radius, r = a/Pw	ft	0.000
Channel slope, s	ft/ft	0.0000
Manning's roughness coeff., n		0.0000
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		
	ft/s	0.0000
Flow length, L	ft	0
$T = L / (3600 * V)$		
	hrs	0.00 = 0.00

.....
 TOTAL TIME (hrs) 0.09

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
 Watershed file: --> 95003\95003E .MOP
 Hydrograph file: --> 95003\E-02.HYD

95003 ECTS_Scenic Technologies
 New Windsor Facility
 Existing Condition

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.10	3.50	3.27	I.01 .10
3-Rub bldg site	0.45	74.0	0.50	0.40	3.50	1.24	I.2 .20
4-east parking	1.31	83.0	0.20	0.30	3.50	1.86	I.12 .12
5-so. parking	0.70	80.0	0.20	0.30	3.50	1.64	I.14 .14
7-west parking	1.00	74.0	0.50	0.75	3.50	1.24	I.2 .20

Travel time from subarea outfall to composite watershed outfall point.
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.17 acres or 0.00964 sq.mi
 Peak discharge = 6 cfs

WARNING: Drainage areas of two or more subareas
 differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.10	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.46	0.46	0.50	0.40	Yes	--
4-east parking	0.25	0.25	0.20	0.30	Yes	--
5-so. parking	0.25	0.25	0.20	0.30	Yes	--
7-west parking	0.57	0.57	0.50	0.75	Yes	--

* Travel time from subarea outfall to composite watershed outfall point.
 Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-02.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	6	10.2
3-Rub bldg site	0	0.0
4-east parking	1	10.3
5-so. parking	1	10.5
7-west parking	0	0.0
Composite Watershed	6	10.2

12.6
12.7

1
1

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	0	0	1	1	2	4	6	5	3
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	1	1
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	0	0	1	1	2	4	6	6	4

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	2	2	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	0	0	0	0	0
5-so. parking	1	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	4	3	2	2	1	1	1	1	1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
 Watershed file: --> 95003\95003E .MOP
 Hydrograph file: --> 95003\E-02.HYD

95003 ECTS_Scenic Technologies
 New Windsor Facility
 Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	1	0	0	0	0
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	0	0	0	0

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	0	0	0	0	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so. parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	0	0	0	0	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	0	12.8	1
9.1	0	12.9	1
9.2	0	13.0	1
9.3	0	13.1	1
9.4	0	13.2	1
9.5	1	13.3	1
9.6	1	13.4	1
9.7	1	13.5	1
9.8	1	13.6	1
9.9	1	13.7	1
10.0	2	13.8	0
10.1	4	13.9	0
10.2	6	14.0	0
10.3	6	14.1	0
10.4	4	14.2	0
10.5	4	14.3	0
10.6	3	14.4	0
10.7	2	14.5	0
10.8	2	14.6	0
10.9	2	14.7	0
11.0	1	14.8	0
11.1	1	14.9	0
11.2	1	15.0	0
11.3	1	15.1	0
11.4	1	15.2	0
11.5	1	15.3	0
11.6	1	15.4	0
11.7	1	15.5	0
11.8	1	15.6	0
11.9	1	15.7	0
12.0	1	15.8	0
12.1	1	15.9	0
12.2	1	16.0	0
12.3	1	16.1	0
12.4	1	16.2	0
12.5	1	16.3	0

12.6
12.7

1
1

16.4
16.5

0
0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	0	20.4	0
16.7	0	20.5	0
16.8	0	20.6	0
16.9	0	20.7	0
17.0	0	20.8	0
17.1	0	20.9	0
17.2	0	21.0	0
17.3	0	21.1	0
17.4	0	21.2	0
17.5	0	21.3	0
17.6	0	21.4	0
17.7	0	21.5	0
17.8	0	21.6	0
17.9	0	21.7	0
18.0	0	21.8	0
18.1	0	21.9	0
18.2	0	22.0	0
18.3	0	22.1	0
18.4	0	22.2	0
18.5	0	22.3	0
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0		
20.3	0		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-10.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.10	6.00	5.76	I.01 .10
3-Rub bldg site	0.45	74.0	0.50	0.40	6.00	3.18	I.12 .12
4-east parking	1.31	83.0	0.20	0.30	6.00	4.09	I.07 .10
5-so. parking	0.70	80.0	0.20	0.30	6.00	3.78	I.08 .10
7-west parking	1.00	74.0	0.50	0.75	6.00	3.18	I.12 .12

Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.17 acres or 0.00964 sq.mi
Peak discharge = 12 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.10	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.46	0.46	0.50	0.40	Yes	--
4-east parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
5-so. parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
7-west parking	0.57	0.57	0.50	0.75	Yes	--

Travel time from subarea outfall to composite watershed outfall point.
Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	10	10.2
3-Rub bldg site	1	10.8
4-east parking	3	10.5
5-so. parking	1	10.2
7-west parking	1	10.7
Composite Watershed	12	10.2

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	1	2	4	7	10	9	5
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	1	1	1	2	2
5-so. parking	0	0	0	0	0	0	1	1	1
6-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	2	5	8	12	12	8

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	4	3	3	2	2	2	1	1	1
3-Rub bldg site	0	0	0	1	0	0	0	0	0
4-east parking	3	2	2	1	1	1	1	1	0
5-so. parking	1	1	1	1	0	0	0	0	0
7-west parking	0	0	1	1	1	1	1	1	1
Total (cfs)	8	6	7	6	4	4	3	3	2

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06

Watershed file: --> 95003\95003E .MOP

Hydrograph file: --> 95003\E-10.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so. parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	1
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	1	13.2	1
9.5	1	13.3	1
9.6	1	13.4	1
9.7	1	13.5	1
9.8	2	13.6	1
9.9	2	13.7	1
10.0	5	13.8	1
10.1	8	13.9	1
10.2	12	14.0	1
10.3	12	14.1	1
10.4	8	14.2	1
10.5	8	14.3	1
10.6	6	14.4	1
10.7	7	14.5	1
10.8	6	14.6	1
10.9	5	14.7	1
11.0	4	14.8	1
11.1	4	14.9	1
11.2	4	15.0	1
11.3	4	15.1	1
11.4	3	15.2	1
11.5	3	15.3	1
11.6	3	15.4	1
11.7	2	15.5	1
11.8	2	15.6	1
11.9	2	15.7	1
12.0	1	15.8	1
12.1	1	15.9	1
12.2	1	16.0	1
12.3	1	16.1	1
12.4	1	16.2	1
12.5	1	16.3	1

12.6
12.7

1
1

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.10	8.50	8.26	I0 .10
3-Rub bldg site	0.45	74.0	0.50	0.40	8.50	5.38	I.08 .10
4-east parking	1.31	83.0	0.20	0.30	8.50	6.46	I.05 .10
5-so. parking	0.70	80.0	0.20	0.30	8.50	6.10	I.06 .10
7-west parking	1.00	74.0	0.50	0.75	8.50	5.38	I.08 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.17 acres or 0.00964 sq.mi
Peak discharge = 18 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.10	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.46	0.46	0.50	0.40	No	Computed Ia/p < .1
4-east parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
5-so. parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
7-west parking	0.57	0.57	0.50	0.75	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
* Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	15	10.2
3-Rub bldg site	1	10.5
4-east parking	4	10.4
5-so. parking	2	10.4
7-west parking	2	11.0
Composite Watershed	18	10.2

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	2	3	5	10	15	13	8
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	1	1	1	2	3	4
5-so. parking	0	0	0	0	0	1	1	1	2
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	2	4	6	12	18	17	14

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	5	4	4	3	3	2	2	2	2
3-Rub bldg site	1	1	1	1	1	1	0	0	0
4-east parking	4	4	3	2	1	1	1	1	1
5-so. parking	2	2	1	1	1	1	0	0	0
7-west parking	1	1	1	1	2	2	1	1	1
Total (cfs)	13	12	10	8	8	7	4	4	4

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	2	2	2	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	1	0	0	0	0
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	1	1	0	0	0	0	0	0	0
Total (cfs)	4	4	3	2	2	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so. parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	2
9.1	1	12.9	2
9.2	1	13.0	2
9.3	1	13.1	2
9.4	1	13.2	2
9.5	2	13.3	2
9.6	2	13.4	2
9.7	3	13.5	2
9.8	3	13.6	2
9.9	4	13.7	2
10.0	6	13.8	1
10.1	12	13.9	1
10.2	18	14.0	1
10.3	17	14.1	1
10.4	14	14.2	1
10.5	13	14.3	1
10.6	12	14.4	1
10.7	10	14.5	1
10.8	8	14.6	1
10.9	8	14.7	1
11.0	8	14.8	1
11.1	8	14.9	1
11.2	7	15.0	1
11.3	5	15.1	1
11.4	4	15.2	1
11.5	4	15.3	1
11.6	4	15.4	1
11.7	4	15.5	1
11.8	4	15.6	1
11.9	4	15.7	1
12.0	4	15.8	1
12.1	4	15.9	1
12.2	4	16.0	1
12.3	4	16.1	1
12.4	4	16.2	1
12.5	3	16.3	1

12.6
12.7

3
3

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06

Watershed file: --> 95003\95003E .MOP

Hydrograph file: --> 95003\E-50.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.10	6.50	6.26	I.01 .10
3-Rub bldg site	0.45	74.0	0.50	0.40	6.50	3.61	I.11 .11
4-east parking	1.31	83.0	0.20	0.30	6.50	4.56	I.06 .10
5-so. parking	0.70	80.0	0.20	0.30	6.50	4.24	I.08 .10
7-west parking	1.00	74.0	0.50	0.75	6.50	3.61	I.11 .11

Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.17 acres or 0.00964 sq.mi
Peak discharge = 13 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated (Yes/No)	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)		
1-main building	0.10	0.10	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.46	0.46	0.50	0.40	Yes	--
4-east parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
5-so. parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
7-west parking	0.57	0.57	0.50	0.75	Yes	--

* Travel time from subarea outfall to composite watershed outfall point.
Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	11	10.2
3-Rub bldg site	1	10.7
4-east parking	3	10.4
5-so. parking	1	10.2
7-west parking	1	10.7
Composite Watershed	13	10.2

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	1	2	4	7	11	10	6
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	1	1	1	2	3
5-so. parking	0	0	0	0	0	0	1	1	1
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	2	5	8	13	13	10

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	4	3	3	2	2	2	2	1	1
3-Rub bldg site	0	0	1	1	1	0	0	0	0
4-east parking	3	2	2	2	1	1	1	1	1
5-so. parking	1	1	1	1	1	0	0	0	0
7-west parking	0	0	1	1	1	1	1	1	1
Total (cfs)	8	6	8	7	6	4	4	3	3

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	1	0	0	0	0	0	0	0	0
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	2	1	1	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so. parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	1
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	1	13.2	1
9.5	1	13.3	1
9.6	1	13.4	1
9.7	1	13.5	1
9.8	2	13.6	1
9.9	2	13.7	1
10.0	5	13.8	1
10.1	8	13.9	1
10.2	13	14.0	1
10.3	13	14.1	1
10.4	10	14.2	1
10.5	8	14.3	1
10.6	6	14.4	1
10.7	8	14.5	1
10.8	7	14.6	1
10.9	6	14.7	1
11.0	6	14.8	1
11.1	5	14.9	1
11.2	4	15.0	1
11.3	4	15.1	1
11.4	4	15.2	1
11.5	4	15.3	1
11.6	3	15.4	1
11.7	3	15.5	1
11.8	3	15.6	1
11.9	2	15.7	1
12.0	2	15.8	1
12.1	2	15.9	1
12.2	1	16.0	1
12.3	1	16.1	1
12.4	1	16.2	1
12.5	1	16.3	1

12.6
12.7

1
1

16.4
16.5

1
1



TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
 Watershed file: --> 95003\95003E .MOP
 Hydrograph file: --> 95003\E-100.HYD

95003 ECTS_Scenic Technologies
 New Windsor Facility
 Existing Condition

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.10	8.00	7.76	I.01 .10
3-Rub bldg site	0.45	74.0	0.50	0.40	8.00	4.93	I.09 .10
4-east parking	1.31	83.0	0.20	0.30	8.00	5.98	I.05 .10
5-so. parking	0.70	80.0	0.20	0.30	8.00	5.63	I.06 .10
7-west parking	1.00	74.0	0.50	0.75	8.00	4.93	I.09 .10

* Travel time from subarea outfall to composite watershed outfall point.
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.17 acres or 0.00964 sq.mi
 Peak discharge = 17 cfs

WARNING: Drainage areas of two or more subareas
 differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated (Yes/No)	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)		
1-main building	0.10	0.10	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.46	0.46	0.50	0.40	No	Computed Ia/p < .1
4-east parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
5-so. parking	0.25	0.25	0.20	0.30	No	Computed Ia/p < .1
7-west parking	0.57	0.57	0.50	0.75	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
 * Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-100.HYD

95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	14	10.2
3-Rub bldg site	1	10.6
4-east parking	4	10.4
5-so. parking	2	10.4
7-west parking	2	11.0
Composite Watershed	17	10.2

TR-55 TABULAR HYDROGRAPH METHOD
 Type I.T Distribution
 (24 hr. Duration Storm)

Executed: 08-22-1996 11:34:06
 Watershed file: --> 95003\95003E .MOP
 Hydrograph file: --> 95003\E-100.HYD

95003 ECTS_Scenic Technologies
 New Windsor Facility
 Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	2	3	5	9	14	12	7
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	1	1	1	2	3	4
5-so. parking	0	0	0	0	0	1	1	1	2
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	2	4	6	11	17	16	13

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	5	4	3	3	2	2	2	2	2
3-Rub bldg site	0	1	1	1	1	1	0	0	0
4-east parking	4	3	3	2	1	1	1	1	1
5-so. parking	2	2	1	1	1	1	0	0	0
7-west parking	0	1	1	1	2	2	1	1	1
Total (cfs)	11	11	9	8	7	7	4	4	4

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-100.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	2	2	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	0	0	0	0	0
5-so. parking	0	0	0	0	0	0	0	0	0
7-west parking	1	1	0	0	0	0	0	0	0
Total (cfs)	4	4	2	2	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so. parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-100.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	2
9.1	1	12.9	2
9.2	1	13.0	2
9.3	1	13.1	2
9.4	1	13.2	2
9.5	2	13.3	1
9.6	2	13.4	1
9.7	3	13.5	1
9.8	3	13.6	1
9.9	4	13.7	1
10.0	6	13.8	1
10.1	11	13.9	1
10.2	17	14.0	1
10.3	16	14.1	1
10.4	13	14.2	1
10.5	11	14.3	1
10.6	11	14.4	1
10.7	9	14.5	1
10.8	8	14.6	1
10.9	8	14.7	1
11.0	7	14.8	1
11.1	7	14.9	1
11.2	7	15.0	1
11.3	5	15.1	1
11.4	4	15.2	1
11.5	4	15.3	1
11.6	4	15.4	1
11.7	4	15.5	1
11.8	4	15.6	1
11.9	4	15.7	1
12.0	4	15.8	1
12.1	4	15.9	1
12.2	4	16.0	1
12.3	4	16.1	1
12.4	3	16.2	1
12.5	3	16.3	1

12.6
12.7

2
2

16.4
16.5

1
1



TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 11:34:06
Watershed file: --> 95003\95003E .MOP
Hydrograph file: --> 95003\E-100.HYD95003 ECTS_Scenic Technologies
New Windsor Facility
Existing Condition

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

POND-2 Version: 5.17 S/N:

>>>>> OUTFLOW HYDROGRAPH ESTIMATOR <<<<<

Inflow Hydrograph: c:\pondpack\95003\E-100 .HYD

Qpeak = 30.0 cfs

Estimated Outflow: c:\pondpack\95003\ESTIMATE.EST

Qpeak = 17.0 cfs

Approximate Storage Volume
(computed from t= 9.90 to 10.25 hrs)

0.2 acre-ft

POND-2 Version: 5.17

S/N:

95003 ECTS_Scenic Technologies
New Windsor Facility
West Parking Lot Detention Pond

CALCULATED 08-26-1996 20:26:01
DISK FILE: c:\pondpack\95003\EASTPOND.VOL

Planimeter scale: 1 inch = 40 ft.

*					
Elevation (ft)	Planimeter (sq.in.)	Area (acres)	Area A1+A2+sq ^r (A1*A2) (acres)	Volume (acre-ft)	Volume Sum (acre-ft)
300.00	0.00	0.00	0.00	0.00	0.00
300.50	3.33	0.12	0.12	0.02	0.02
301.00	7.56	0.28	0.58	0.10	0.12
301.50	12.40	0.46	1.09	0.18	0.30

* Incremental volume computed by the Conic Method for Reservoir Volumes.

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sq.rt.}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 = Lower and upper elevations of the increment
Area1, Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Outlet Structure File: WEST-OUT.STR

POND-2 Version: 5.17

S/N:

Date Executed:

Time Executed:

***** COMPOSITE OUTFLOW SUMMARY ****

Elevation (ft)	Q (cfs)	Contributing Structures
----------------	---------	-------------------------

300.00	0.0	1
300.10	0.6	1
300.20	1.7	1
300.30	3.2	1
300.40	4.9	1
300.50	6.8	1
300.60	8.9	1
300.70	11.2	1
300.80	13.7	1
300.90	16.4	1
301.00	19.2	1
301.10	22.2	1
301.20	25.2	1
301.30	28.5	1
301.40	31.8	1
301.50	35.3	1

Outlet Structure File: WEST-OUT.STR

POND-2 Version: 5.17 S/N:
Date Executed: Time Executed:

Outlet Structure File: c:\pondpack\95003\WEST-OUT.STR
Planimeter Input File: c:\pondpack\95003\EASTPOND.VOL
Rating Table Output File: c:\pondpack\95003\WESTSTOR.PND

Min. Elev.(ft) = 300 Max. Elev.(ft) = 301.5 Incr.(ft) = .1

Additional elevations (ft) to be included in table:

SYSTEM CONNECTIVITY

Structure	No.	Q Table	Q Table
INLET BOX	1	->	1

Outflow rating table summary was stored in file:
c:\pondpack\95003\WESTSTOR.PND

Outlet Structure File: WEST-OUT.STR

POND-2 Version: 5.17 S/N:
Date Executed: Time Executed:

>>>>>> Structure No. 1 <<<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

E1 elev.(ft)?	300
E2 elev.(ft)?	301.501
Crest elev.(ft)?	300
Weir length (ft)?	32.0
Weir coefficient?	.6
Orifice area (sq.ft)?	30.00
Orifice coefficient?	.6
Start transition elev.(ft) @ ?	
Transition height (ft)?	

Outlet Structure File: WEST-OUT.STR

POND-2 Version: 5.17 S/N:
Date Executed: Time Executed:

Outflow Rating Table for Structure #1
INLET BOX Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

Elevation (ft) Q (cfs) Computation Messages

300.00	0.0	Weir:	H =0.0
300.10	0.6	Weir:	H =.1
300.20	1.7	Weir:	H =.2
300.30	3.2	Weir:	H =.3
300.40	4.9	Weir:	H =.4
300.50	6.8	Weir:	H =.5
300.60	8.9	Weir:	H =.6
300.70	11.2	Weir:	H =.7
300.80	13.7	Weir:	H =.8
300.90	16.4	Weir:	H =.9
301.00	19.2	Weir:	H =1.0
301.10	22.2	Weir:	H =1.1
301.20	25.2	Weir:	H =1.2
301.30	28.5	Weir:	H =1.3
301.40	31.8	Weir:	H =1.4
301.50	35.3	Weir:	H =1.5

Weir Cw = .6 Weir length = 32 ft
Orifice Co = .6 Orifice area = 30 sq.ft.
 $Q \text{ (cfs)} = (Cw * L * H^{1.5}) \text{ or } (Co * A * \text{sqr}(2*g*H))$
No transition used, transition height = 0.0
Weir equation = Orifice equation @ elev.= 307.5234 ft

```
*****
*                               *
* 95003 ECTS-Scenic Technologies *
*   New Windsor Facility         *
* west parking lot detention pond *
*                               *
*                               *
*****
```

Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD
Rating Table file: c:\pondpack\95003\WESTSTOR.PND

---INITIAL CONDITIONS---

Elevation = 300.00 ft
Outflow = 0.00 cfs
Storage = 0.00 ac-ft

INTERMEDIATE ROUTING
GIVEN POND DATA COMPUTATIONS

ELEVATION			OUTFLOW		STORAGE		2S/t	2S/t + 0
(ft)	(cfs)	(ac-ft)	(cfs)	(ac-ft)	(cfs)	(cfs)		
300.00	0.0	0.000	0.0	0.0	0.0	0.0		
300.10	0.6	0.000	0.0	0.0	0.6	0.6		
300.20	1.7	0.001	0.3	0.3	2.0	2.0		
300.30	3.2	0.004	1.1	1.1	4.3	4.3		
300.40	4.9	0.010	2.5	2.5	7.4	7.4		
300.50	6.8	0.020	4.9	4.9	11.7	11.7		
300.60	8.9	0.034	8.2	8.2	17.1	17.1		
300.70	11.2	0.050	12.1	12.1	23.3	23.3		
300.80	13.7	0.069	16.8	16.8	30.5	30.5		
300.90	16.4	0.092	22.2	22.2	38.6	38.6		
301.00	19.2	0.118	28.5	28.5	47.7	47.7		
301.10	22.2	0.147	35.6	35.6	57.8	57.8		
301.20	25.2	0.180	43.5	43.5	68.7	68.7		
301.30	28.5	0.216	52.2	52.2	80.7	80.7		
301.40	31.8	0.256	61.8	61.8	93.6	93.6		
301.50	35.3	0.299	72.4	72.4	107.7	107.7		

Time increment (t) = 0.100 hrs.

File: c:\pondpack\95003\WESTSTOR.PND
Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD
Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

INFLOW HYDROGRAPH

ROUTING COMPUTATIONS

TIME	INFLOW	O	I1+I2	2S/t -	2S/t +	O	OUTFLOW	ELEVATION
(hrs)	(cfs)		(cfs)	(cfs)	(cfs)		(ft)	
9.000	1.00		0.0	0.0	0.00		300.00	
9.100	1.00	2.0	-1.4	2.0	1.69		300.20	
9.200	1.00	2.0	-0.5	0.6	0.59		300.10	
9.300	1.00	2.0	-1.0	1.5	1.25		300.16	
9.400	2.00	3.0	-1.3	2.0	1.65		300.20	
9.500	3.00	5.0	-1.9	3.7	2.79		300.27	
9.600	4.00	7.0	-2.2	5.1	3.63		300.33	
9.700	6.00	10.0	-2.3	7.8	5.07		300.41	
9.800	8.00	14.0	-1.9	11.7	6.77		300.50	
9.900	10.00	18.0	-0.9	16.1	8.52		300.58	
10.000	21.00	31.0	3.0	30.1	13.56		300.79	
10.100	31.00	52.0	12.2	55.0	21.36		301.07	
10.200	23.00	54.0	17.2	66.2	24.53		301.18	
10.300	13.00	36.0	11.5	53.2	20.83		301.05	
10.400	9.00	22.0	4.1	33.5	14.71		300.84	
10.500	8.00	17.0	0.3	21.1	10.38		300.66	
10.600	7.00	15.0	-1.1	15.3	8.21		300.57	
10.700	6.00	13.0	-1.8	11.9	6.87		300.50	
10.800	6.00	12.0	-2.1	10.2	6.11		300.46	
10.900	5.00	11.0	-2.2	8.9	5.57		300.44	
11.000	4.00	9.0	-2.3	6.8	4.57		300.38	
11.100	4.00	8.0	-2.2	5.7	3.96		300.34	
11.200	4.00	8.0	-2.3	5.8	4.00		300.35	
11.300	4.00	8.0	-2.2	5.7	4.00		300.35	
11.400	4.00	8.0	-2.2	5.8	4.00		300.35	
11.500	4.00	8.0	-2.2	5.8	4.00		300.35	
11.600	4.00	8.0	-2.2	5.8	4.00		300.35	
11.700	4.00	8.0	-2.2	5.8	4.00		300.35	
11.800	4.00	8.0	-2.2	5.8	4.00		300.35	
11.900	4.00	8.0	-2.2	5.8	4.00		300.35	
12.000	4.00	8.0	-2.2	5.8	4.00		300.35	
12.100	4.00	8.0	-2.2	5.8	4.00		300.35	
12.200	4.00	8.0	-2.2	5.8	4.00		300.35	
12.300	4.00	8.0	-2.2	5.8	4.00		300.35	
12.400	3.00	7.0	-2.2	4.8	3.46		300.32	
12.500	3.00	6.0	-2.0	3.8	2.91		300.28	
12.600	2.00	5.0	-1.7	3.0	2.36		300.24	
12.700	2.00	4.0	-1.5	2.3	1.88		300.21	
12.800	2.00	4.0	-1.6	2.5	2.04		300.22	
12.900	1.00	3.0	-1.0	1.4	1.24		300.16	
13.000	1.00	2.0	-0.8	1.0	0.85		300.12	
13.100	1.00	2.0	-0.9	1.2	1.09		300.14	
13.200	1.00	2.0	-0.8	1.1	0.95		300.13	
13.300	1.00	2.0	-0.9	1.2	1.03		300.14	
13.400	1.00	2.0	-0.8	1.1	0.98		300.13	

EXECUTED: 08-26-1996 20:30:15

Inflow File: c:\pondpack\95003\WESTSTOR.PND

Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD

Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

INFLOW HYDROGRAPH				ROUTING COMPUTATIONS			
TIME	INFLOW	I1+I2	2S/t - O	2S/t + O	OUTFLOW	ELEVATION	
(hrs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(ft)	
13.500	1.00	2.0	-0.9	1.2	1.01	300.14	
13.600	1.00	2.0	-0.9	1.1	0.99	300.14	
13.700	1.00	2.0	-0.9	1.1	1.00	300.14	
13.800	1.00	2.0	-0.9	1.1	1.00	300.14	
13.900	1.00	2.0	-0.9	1.1	1.00	300.14	
14.000	1.00	2.0	-0.9	1.1	1.00	300.14	
14.100	1.00	2.0	-0.9	1.1	1.00	300.14	
14.200	1.00	2.0	-0.9	1.1	1.00	300.14	
14.300	1.00	2.0	-0.9	1.1	1.00	300.14	
14.400	1.00	2.0	-0.9	1.1	1.00	300.14	
14.500	1.00	2.0	-0.9	1.1	1.00	300.14	
14.600	1.00	2.0	-0.9	1.1	1.00	300.14	
14.700	1.00	2.0	-0.9	1.1	1.00	300.14	
14.800	1.00	2.0	-0.9	1.1	1.00	300.14	
14.900	1.00	2.0	-0.9	1.1	1.00	300.14	
15.000	1.00	2.0	-0.9	1.1	1.00	300.14	
15.100	1.00	2.0	-0.9	1.1	1.00	300.14	
15.200	1.00	2.0	-0.9	1.1	1.00	300.14	
15.300	1.00	2.0	-0.9	1.1	1.00	300.14	
15.400	1.00	2.0	-0.9	1.1	1.00	300.14	
15.500	1.00	2.0	-0.9	1.1	1.00	300.14	
15.600	1.00	2.0	-0.9	1.1	1.00	300.14	
15.700	1.00	2.0	-0.9	1.1	1.00	300.14	
15.800	1.00	2.0	-0.9	1.1	1.00	300.14	
15.900	1.00	2.0	-0.9	1.1	1.00	300.14	
16.000	1.00	2.0	-0.9	1.1	1.00	300.14	
16.100	1.00	2.0	-0.9	1.1	1.00	300.14	
16.200	1.00	2.0	-0.9	1.1	1.00	300.14	
16.300	1.00	2.0	-0.9	1.1	1.00	300.14	
16.400	1.00	2.0	-0.9	1.1	1.00	300.14	
16.500	1.00	2.0	-0.9	1.1	1.00	300.14	
16.600	1.00	2.0	-0.9	1.1	1.00	300.14	
16.700	1.00	2.0	-0.9	1.1	1.00	300.14	
16.800	1.00	2.0	-0.9	1.1	1.00	300.14	
16.900	1.00	2.0	-0.9	1.1	1.00	300.14	
17.000	1.00	2.0	-0.9	1.1	1.00	300.14	
17.100	1.00	2.0	-0.9	1.1	1.00	300.14	
17.200	1.00	2.0	-0.9	1.1	1.00	300.14	
17.300	1.00	2.0	-0.9	1.1	1.00	300.14	
17.400	1.00	2.0	-0.9	1.1	1.00	300.14	
17.500	1.00	2.0	-0.9	1.1	1.00	300.14	
17.600	1.00	2.0	-0.9	1.1	1.00	300.14	
17.700	1.00	2.0	-0.9	1.1	1.00	300.14	
17.800	1.00	2.0	-0.9	1.1	1.00	300.14	
17.900	1.00	2.0	-0.9	1.1	1.00	300.14	
18.000	1.00	2.0	-0.9	1.1	1.00	300.14	

EXECUTED: 08-26-1996 20:30:15

File: c:\pondpack\95003\WESTSTOR.PND

Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD

Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

INFLOW HYDROGRAPH ROUTING COMPUTATIONS

TIME	INFLOW	I+I2	2S/t - O	2S/t + O	OUTFLOW	ELEVATION
(hrs)	(cfs)	(cfs)	(cfs)	(cfs)	(ft)	
18.100	1.00	2.0	-0.9	1.1	1.00	300.14
18.200	1.00	2.0	-0.9	1.1	1.00	300.14
18.300	1.00	2.0	-0.9	1.1	1.00	300.14
18.400	1.00	2.0	-0.9	1.1	1.00	300.14
18.500	1.00	2.0	-0.9	1.1	1.00	300.14
18.600	1.00	2.0	-0.9	1.1	1.00	300.14
18.700	1.00	2.0	-0.9	1.1	1.00	300.14
18.800	1.00	2.0	-0.9	1.1	1.00	300.14
18.900	1.00	2.0	-0.9	1.1	1.00	300.14
19.000	1.00	2.0	-0.9	1.1	1.00	300.14
19.100	1.00	2.0	-0.9	1.1	1.00	300.14
19.200	1.00	2.0	-0.9	1.1	1.00	300.14
19.300	1.00	2.0	-0.9	1.1	1.00	300.14
19.400	1.00	2.0	-0.9	1.1	1.00	300.14
19.500	1.00	2.0	-0.9	1.1	1.00	300.14
19.600	1.00	2.0	-0.9	1.1	1.00	300.14
19.700	1.00	2.0	-0.9	1.1	1.00	300.14
19.800	1.00	2.0	-0.9	1.1	1.00	300.14
19.900	1.00	2.0	-0.9	1.1	1.00	300.14
20.000	1.00	2.0	-0.9	1.1	1.00	300.14
20.100	1.00	2.0	-0.9	1.1	1.00	300.14
20.200	1.00	2.0	-0.9	1.1	1.00	300.14
20.300	1.00	2.0	-0.9	1.1	1.00	300.14
20.400	1.00	2.0	-0.9	1.1	1.00	300.14
20.500	1.00	2.0	-0.9	1.1	1.00	300.14
20.600	1.00	2.0	-0.9	1.1	1.00	300.14
20.700	1.00	2.0	-0.9	1.1	1.00	300.14
20.800	1.00	2.0	-0.9	1.1	1.00	300.14
20.900	1.00	2.0	-0.9	1.1	1.00	300.14
21.000	1.00	2.0	-0.9	1.1	1.00	300.14
21.100	1.00	2.0	-0.9	1.1	1.00	300.14
21.200	1.00	2.0	-0.9	1.1	1.00	300.14
21.300	1.00	2.0	-0.9	1.1	1.00	300.14
21.400	1.00	2.0	-0.9	1.1	1.00	300.14
21.500	1.00	2.0	-0.9	1.1	1.00	300.14
21.600	1.00	2.0	-0.9	1.1	1.00	300.14
21.700	1.00	2.0	-0.9	1.1	1.00	300.14
21.800	1.00	2.0	-0.9	1.1	1.00	300.14
21.900	1.00	2.0	-0.9	1.1	1.00	300.14
22.000	0.00	1.0	-0.1	0.1	0.13	300.02
22.100	0.00	0.0	-0.1	-0.1	0.00	300.00
22.200	0.00	0.0	-0.1	-0.1	0.00	300.00
22.300	0.00	0.0	-0.1	-0.1	0.00	300.00
22.400	0.00	0.0	-0.1	-0.1	0.00	300.00
22.500	0.00	0.0	-0.1	-0.1	0.00	300.00
22.600	0.00	0.0	-0.1	-0.1	0.00	300.00

POND-2 Version: 5.17 S/N:
EXECUTED: 08-26-1996 20:30:15

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and File: c:\pondpack\95003\WESTSTOR.PND
Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD
Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

INFLOW HYDROGRAPH

ROUTING COMPUTATIONS

TIME	INFLOW	I1+I2	2S/t - O	2S/t + O	OUTFLOW	ELEVATION
(hrs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(ft)
22.700	0.00	0.0	-0.1	-0.1	0.00	300.00
22.800	0.00	0.0	-0.1	-0.1	0.00	300.00
22.900	0.00	0.0	-0.1	-0.1	0.00	300.00
23.000	0.00	0.0	-0.1	-0.1	0.00	300.00
23.100	0.00	0.0	-0.1	-0.1	0.00	300.00
23.200	0.00	0.0	-0.1	-0.1	0.00	300.00
23.300	0.00	0.0	-0.1	-0.1	0.00	300.00
23.400	0.00	0.0	-0.1	-0.1	0.00	300.00
23.500	0.00	0.0	-0.1	-0.1	0.00	300.00
23.600	0.00	0.0	-0.1	-0.1	0.00	300.00
23.700	0.00	0.0	-0.1	-0.1	0.00	300.00
23.800	0.00	0.0	-0.1	-0.1	0.00	300.00
23.900	0.00	0.0	-0.1	-0.1	0.00	300.00

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: c:\pondpack\95003\WESTSTOR.PND
Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD
Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

Starting Pond W.S. Elevation = 300.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 31.00 cfs
Peak Outflow = 24.53 cfs
Peak Elevation = 301.18 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0.00 ac-ft
Peak Storage From Storm = 0.17 ac-ft

Total Storage in Pond = 0.17 ac-ft

Warning: Inflow hydrograph truncated on left side.

Pond File: c:\pondpack\95003\WESTSTOR.PND

Inflow Hydrograph: c:\pondpack\95003\E-25 .HYD

Outflow Hydrograph: c:\pondpack\95003\OUT .HYD

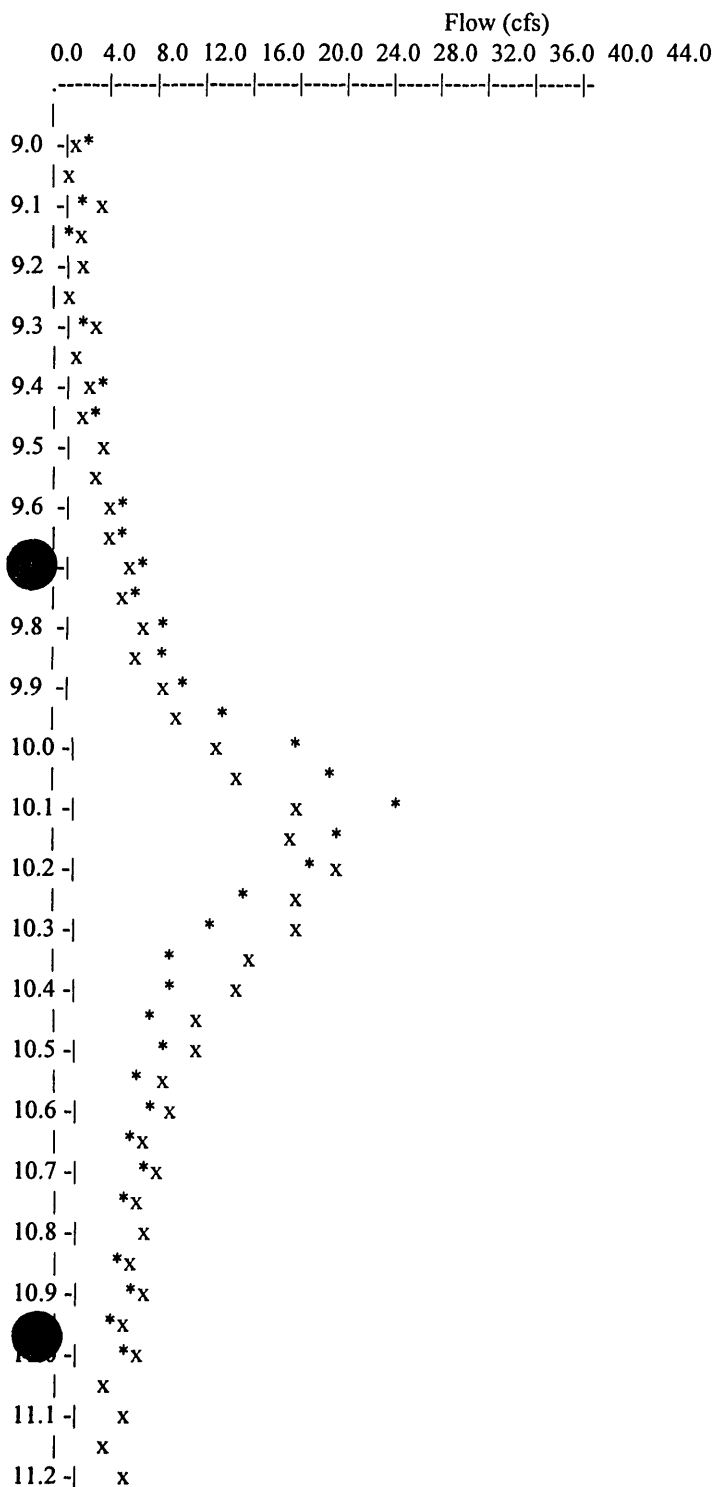
EXECUTED: 08-26-1996

Peak Inflow = 31.00 cfs

20:30:15

Peak Outflow = 24.53 cfs

Peak Elevation = 301.18 ft



| x
11.3 -| x
| x
11.4 -| x
| x
11.5 -| x
| x
11.6 -| x
| x
11.7 -| x
| x
11.8 -| x
| x
11.9 -| x
| x
12.0 -| x
| x
12.1 -| x
| x
12.2 -| x
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| *x
12.4 -| *x
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12.7 -| x
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12.8 -| x
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13.1 -| *x
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13.4 -| x
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13.5 -| *x
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15.0 -| x
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15.1 -| x
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15.4 -| x
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15.5 -| x
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15.6 -| x
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15.8 -| x
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15.9 -| x
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16.0 -| x
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16.1 -| x
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16.2 -| x
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16.3 -| x
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16.4 -| x
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16.5 -| x
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16.6 -| x
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16.7 -| x
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16.8 -| x
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17.1 -| x
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17.9 -| x
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18.0 -| x
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18.1 -| x
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18.2 -| x
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18.3 -| x
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18.4 -| x
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18.5 -| x
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18.6 -| x
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18.7 -| x
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18.8 -| x
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18.9 -| x
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19.0 -| x
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19.1 -| x
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19.2 -| x
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19.3 -| x
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19.4 -| x
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19.5 -| x
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19.6 -| x
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19.7 -| x
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19.8 -| x
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19.9 -| x
| x
20.0 -| x
| x
20.1 -| x
| x
20.2 -| x

|
TIME
(hrs)

File: c:\pondpack\95003\E-25 .HYD Qmax = 31.0 cfs
x File: c:\pondpack\95003\OUT .HYD Qmax = 24.5 cfs

HYDROGRAPH FILE
c:\pondpack\95003\E-25 .HYD

08-26-1996 20:31:12

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.000	1.00	12.800	2.00
9.100	1.00	12.900	1.00
9.200	1.00	13.000	1.00
9.300	1.00	13.100	1.00
9.400	2.00	13.200	1.00
9.500	3.00	13.300	1.00
9.600	4.00	13.400	1.00
9.700	6.00	13.500	1.00
9.800	8.00	13.600	1.00
9.900	10.00	13.700	1.00
10.000	21.00	13.800	1.00
10.100	31.00	13.900	1.00
10.200	23.00	14.000	1.00
10.300	13.00	14.100	1.00
10.400	9.00	14.200	1.00
10.500	8.00	14.300	1.00
10.600	7.00	14.400	1.00
10.700	6.00	14.500	1.00
10.800	6.00	14.600	1.00
10.900	5.00	14.700	1.00
11.000	4.00	14.800	1.00
11.100	4.00	14.900	1.00
11.200	4.00	15.000	1.00
11.300	4.00	15.100	1.00
11.400	4.00	15.200	1.00
11.500	4.00	15.300	1.00
11.600	4.00	15.400	1.00
11.700	4.00	15.500	1.00
11.800	4.00	15.600	1.00
11.900	4.00	15.700	1.00
12.000	4.00	15.800	1.00
12.100	4.00	15.900	1.00
12.200	4.00	16.000	1.00
12.300	4.00	16.100	1.00
12.400	3.00	16.200	1.00
12.500	3.00	16.300	1.00
12.600	2.00	16.400	1.00
12.700	2.00	16.500	1.00

S/N:

HYDROGRAPH FILE

c:\pondpack\95003\E-25 .HYD

08-26-1996 20:31:12

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.600	1.00	20.400	1.00
16.700	1.00	20.500	1.00
16.800	1.00	20.600	1.00
16.900	1.00	20.700	1.00
17.000	1.00	20.800	1.00
17.100	1.00	20.900	1.00
17.200	1.00	21.000	1.00
17.300	1.00	21.100	1.00
17.400	1.00	21.200	1.00
17.500	1.00	21.300	1.00
17.600	1.00	21.400	1.00
17.700	1.00	21.500	1.00
17.800	1.00	21.600	1.00
17.900	1.00	21.700	1.00
18.000	1.00	21.800	1.00
18.100	1.00	21.900	1.00
18.200	1.00	22.000	0.00
18.300	1.00	22.100	0.00
18.400	1.00	22.200	0.00
18.500	1.00	22.300	0.00
18.600	1.00	22.400	0.00
18.700	1.00	22.500	0.00
18.800	1.00	22.600	0.00
18.900	1.00	22.700	0.00
19.000	1.00	22.800	0.00
19.100	1.00	22.900	0.00
19.200	1.00	23.000	0.00
19.300	1.00	23.100	0.00
19.400	1.00	23.200	0.00
19.500	1.00	23.300	0.00
19.600	1.00	23.400	0.00
19.700	1.00	23.500	0.00
19.800	1.00	23.600	0.00
19.900	1.00	23.700	0.00
20.000	1.00	23.800	0.00
20.100	1.00	23.900	0.00
20.200	1.00		
20.300	1.00		

Quick TR-55 Ver.5.46 S/N:
Executed: 13:23:11 08-22-1996 95003\95003D.TCT

SUMMARY SHEET FOR Tc or Tt COMPUTATIONS
(Solved for Time using TR-55 Methods)

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Subarea descr.	Tc or Tt	Time (hrs)
-----	-----	-----
1-main bldg	Tc	0.10
3-Rub bldg site	Tc	0.05
4-east parking	Tc	0.27
5-so.parking	Tc	0.09
7-west parking	Tc	0.20

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95003 ECTS-Scenic Technologies
 New Windsor Facility
 Developed

Tc COMPUTATIONS FOR: 7-west parking

SHEET FLOW (Applicable to Tc only)

Segment ID	7a	
Surface description	paved/grass	
Manning's roughness coeff., n	0.1200	
Flow length, L (total < or = 300)	ft	90.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0100
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2^{0.4} * s^{0.8}}$		
	hrs	0.16 = 0.16

SHALLOW CONCENTRATED FLOW

Segment ID	
Surface (paved or unpaved)?	
Flow length, L	ft 0.0
Watercourse slope, s	ft/ft 0.0000
	0.5
Avg.V = Csf * (s)	ft/s 0.0000
where: Unpaved Csf = 16.1345	
Paved Csf = 20.3282	
$T = L / (3600 * V)$	hrs 0.00 = 0.00

CHANNEL FLOW

Segment ID	7c
Cross Sectional Flow Area, a	sq.ft 1.77
Wetted perimeter, Pw	ft 4.71
Hydraulic radius, r = a/Pw	ft 0.376
Channel slope, s	ft/ft 0.0060
Manning's roughness coeff., n	0.0100
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$	
	ft/s 6.0103
Flow length, L	ft 796
$T = L / (3600 * V)$	hrs 0.04 = 0.04

.....
 TOTAL TIME (hrs) 0.20

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95003 ECTS-Scenic Technologies
 New Windsor Facility
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Tc COMPUTATIONS FOR: 5-so.parking

SHEET FLOW (Applicable to Tc only)

Segment ID	5a	
Surface description	paved/grass	
Manning's roughness coeff., n	0.0800	
Flow length, L (total < or = 300)	ft	120.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0800
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2^{0.4} * s} \quad \text{hrs} \quad 0.06 = 0.06$		

SHALLOW CONCENTRATED FLOW

Segment ID	
Surface (paved or unpaved)?	
Flow length, L	ft 0.0
Watercourse slope, s	ft/ft 0.0000
	0.5
Avg.V = Csf * (s)	ft/s 0.0000
where: Unpaved Csf = 16.1345	
Paved Csf = 20.3282	
$T = L / (3600 * V) \quad \text{hrs} \quad 0.00 = 0.00$	

CHANNEL FLOW

Segment ID	5c
Cross Sectional Flow Area, a	sq.ft 1.23
Wetted perimeter, Pw	ft 3.93
Hydraulic radius, r = a/Pw	ft 0.313
Channel slope, s	ft/ft 0.0200
Manning's roughness coeff., n	0.0100
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n} \quad \text{ft/s} \quad 9.7135$	
Flow length, L	ft 1056
$T = L / (3600 * V) \quad \text{hrs} \quad 0.03 = 0.03$	

.....
 TOTAL TIME (hrs) 0.09

Quick TR-55 Ver.5.46 S/N:
 Executed: 13:23:11 08-22-1996 95003\95003D.TCT

95003 ECTS-Scenic Technologies
 New Windsor Facility
 Developed

Tc COMPUTATIONS FOR: 4-east parking

SHEET FLOW (Applicable to Tc only)

Segment ID	4a	
Surface description	paved/grass	
Manning's roughness coeff., n	0.1500	
Flow length, L (total < or = 300)	ft	70.0
Two-yr 24-hr rainfall, P2	in	3.500
Land slope, s	ft/ft	0.0100
	0.8	
$T = \frac{.007 * (n * L)}{0.5 * P2 * s}$		
	hrs	0.15 = 0.15

SHALLOW CONCENTRATED FLOW

Segment ID	4b	
Surface (paved or unpaved)?	Unpaved	
Flow length, L	ft	560.0
Watercourse slope, s	ft/ft	0.0100
	0.5	
Avg.V = Csf * (s)	ft/s	1.6135
where: Unpaved Csf = 16.1345		
Paved Csf = 20.3282		
$T = L / (3600 * V)$		
	hrs	0.10 = 0.10

CHANNEL FLOW

Segment ID	4c	
Cross Sectional Flow Area, a	sq.ft	1.23
Wetted perimeter, Pw	ft	3.93
Hydraulic radius, r = a/Pw	ft	0.313
Channel slope, s	ft/ft	0.0060
Manning's roughness coeff., n		0.0100
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		
	ft/s	5.3203
Flow length, L	ft	384
$T = L / (3600 * V)$		
	hrs	0.02 = 0.02

.....
 TOTAL TIME (hrs) 0.27

Quick TR-55 Ver.5.46 S/N:
 Executed: 13:23:11 08-22-1996 95003\95003D.TCT

95003 ECTS-Scenic Technologies
 New Windsor Facility
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Tc COMPUTATIONS FOR: 3-Rub bldg site

SHEET FLOW (Applicable to Tc only)

Segment ID		3a	
Surface description		roof	
Manning's roughness coeff., n		0.0110	
Flow length, L (total < or = 300)	ft	40.0	
Two-yr 24-hr rainfall, P2	in	3.500	
Land slope, s	ft/ft	0.0800	
	0.8		
$T = \frac{.007 * (n * L)}{0.5 * P2 * s}$		hrs	0.01 = 0.01

SHALLOW CONCENTRATED FLOW

Segment ID		3b	
Surface (paved or unpaved)?		Unpaved	
Flow length, L	ft	170.0	
Watercourse slope, s	ft/ft	0.0100	
	0.5		
Avg.V = Csf * (s)	ft/s	1.6135	
where: Unpaved Csf = 16.1345			
Paved Csf = 20.3282			
T = L / (3600 * V)	hrs	0.03	= 0.03

CHANNEL FLOW

Segment ID		3c	
Cross Sectional Flow Area, a	sq.ft	1.23	
Wetted perimeter, Pw	ft	3.93	
Hydraulic radius, r = a/Pw	ft	0.313	
Channel slope, s	ft/ft	0.0060	
Manning's roughness coeff., n		0.0100	
	2/3 1/2		
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		ft/s	5.3203
Flow length, L	ft	384	
T = L / (3600 * V)	hrs	0.02	= 0.02

.....
 TOTAL TIME (hrs) 0.05

Quick TR-55 Ver.5.46 S/N:
 Executed: 13:23:11 08-22-1996 95003\95003D.TCT

95003 ECTS-Scenic Technologies
 New Windsor Facility
 Developed

Tc COMPUTATIONS FOR: 1-main bldg

SHEET FLOW (Applicable to Tc only)

Segment ID		1a	
Surface description		roof	
Manning's roughness coeff., n		0.0110	
Flow length, L (total < or = 300)	ft	200.0	
Two-yr 24-hr rainfall, P2	in	3.500	
Land slope, s	ft/ft	0.0800	
	0.8		
$T = \frac{.007 * (n*L)}{0.5 * P2 + 0.4 * s}$		hrs	0.02 = 0.02

SHALLOW CONCENTRATED FLOW

Segment ID		1b	
Surface (paved or unpaved)?		Paved	
Flow length, L	ft	600.0	
Watercourse slope, s	ft/ft	0.0100	
	0.5		
Avg.V = Csf * (s)	ft/s	2.0328	
where: Unpaved Csf = 16.1345			
Paved Csf = 20.3282			
T = L / (3600*V)	hrs	0.08	= 0.08

CHANNEL FLOW

Segment ID			
Cross Sectional Flow Area, a	sq.ft	0.00	
Wetted perimeter, Pw	ft	0.00	
Hydraulic radius, r = a/Pw	ft	0.000	
Channel slope, s	ft/ft	0.0000	
Manning's roughness coeff., n		0.0000	
$V = \frac{1.49 * r^{2/3} * s^{1/2}}{n}$		ft/s	0.0000
Flow length, L	ft	0	
T = L / (3600*V)	hrs	0.00	= 0.00

.....
 TOTAL TIME (hrs) 0.10

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
 Watershed file: --> 95003\95003D .MOP
 Hydrograph file: --> 95003\E-02.HYD

95003 ECTS-Scenic Technologies
 New Windsor Facility
 Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.00	3.50	3.27	I.01 .10
3-Rub bldg site	0.45	94.0	0.10	0.00	3.50	2.84	I.04 .10
4-east parking	1.31	54.0	0.30	0.00	3.50	0.31	I.49 .49
5-so.parking	0.94	91.0	0.10	0.00	3.50	2.54	I.06 .10
7-west parking	1.00	87.0	0.20	0.00	3.50	2.18	I.09 .10

* Travel time from subarea outfall to composite watershed outfall point.
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.41 acres or 0.01002 sq.mi
 Peak discharge = 11 cfs

WARNING: Drainage areas of two or more subareas
 differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.00	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.27	0.00	0.30	0.00	Yes	--
5-so.parking	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1
7-west parking	0.20	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
 Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00

Watershed file: --> 95003\95003D .MOP

Hydrograph file: --> 95003\E-02.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	7	10.1
3-Rub bldg site	1	10.0
4-east parking	0	0.0
5-so.parking	2	10.1
7-west parking	1	10.0
Composite Watershed	11	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

```

      Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-02.HYD

```

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	0	1	1	3	5	7	5	2	2
3-Rub bldg site	0	0	0	0	1	1	1	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	1	1	2	1	1	0
6-west parking	0	0	0	0	1	1	1	1	1
Total (cfs)	0	1	1	4	8	11	8	4	3

[illegible]

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	0	0	0	0	0
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	0	0	0	0	0

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	0	0	0	0	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	0	0	0	0	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	0	12.8	1
9.1	0	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	1	13.2	1
9.5	1	13.3	0
9.6	1	13.4	0
9.7	2	13.5	0
9.8	3	13.6	0
9.9	4	13.7	0
10.0	8	13.8	0
10.1	11	13.9	0
10.2	8	14.0	0
10.3	4	14.1	0
10.4	3	14.2	0
10.5	1	14.3	0
10.6	1	14.4	0
10.7	1	14.5	0
10.8	1	14.6	0
10.9	1	14.7	0
11.0	1	14.8	0
11.1	1	14.9	0
11.2	1	15.0	0
11.3	1	15.1	0
11.4	1	15.2	0
11.5	1	15.3	0
11.6	1	15.4	0
11.7	1	15.5	0
11.8	1	15.6	0
11.9	1	15.7	0
12.0	1	15.8	0
12.1	1	15.9	0
12.2	1	16.0	0
12.3	1	16.1	0
12.4	1	16.2	0
12.5	1	16.3	0

12.6
12.7

1
1

16.4
16.5

0
0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-02.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	0	20.4	0
16.7	0	20.5	0
16.8	0	20.6	0
16.9	0	20.7	0
17.0	0	20.8	0
17.1	0	20.9	0
17.2	0	21.0	0
17.3	0	21.1	0
17.4	0	21.2	0
17.5	0	21.3	0
17.6	0	21.4	0
17.7	0	21.5	0
17.8	0	21.6	0
17.9	0	21.7	0
18.0	0	21.8	0
18.1	0	21.9	0
18.2	0	22.0	0
18.3	0	22.1	0
18.4	0	22.2	0
18.5	0	22.3	0
18.6	0	22.4	0
18.7	0	22.5	0
18.8	0	22.6	0
18.9	0	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0		
20.3	0		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.00	6.00	5.76	I.01 .10
3-Rub bldg site	0.45	94.0	0.10	0.00	6.00	5.30	I.02 .10
4-east parking	1.31	54.0	0.30	0.00	6.00	1.44	I.28 .28
5-so.parking	0.94	91.0	0.10	0.00	6.00	4.96	I.03 .10
7-west parking	1.00	87.0	0.20	0.00	6.00	4.52	I.05 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.41 acres or 0.01002 sq.mi
Peak discharge = 21 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.00	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.27	0.00	0.30	0.00	Yes	--
5-so.parking	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1
7-west parking	0.20	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	12	10.1
3-Rub bldg site	2	10.1
4-east parking	1	10.2
5-so.parking	4	10.1
7-west parking	3	10.1
Composite Watershed	21	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	1	4	8	12	8	4	3
3-Rub bldg site	0	0	0	1	1	2	1	1	0
4-east parking	0	0	0	0	0	0	1	1	1
5-so.parking	0	0	0	1	2	4	2	1	1
7-west parking	0	0	0	1	2	3	3	2	1
Total (cfs)	1	1	1	7	13	21	15	9	6

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	3	2	2	2	2	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	1	1	1	1	0	0	0	0	0
7-west parking	1	1	1	1	0	0	0	0	0
Total (cfs)	5	4	4	4	2	1	1	1	1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	0	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	0	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	1
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	1	13.2	1
9.5	1	13.3	1
9.6	1	13.4	1
9.7	3	13.5	1
9.8	5	13.6	1
9.9	7	13.7	1
10.0	13	13.8	1
10.1	21	13.9	1
10.2	15	14.0	1
10.3	9	14.1	1
10.4	6	14.2	1
10.5	5	14.3	1
10.6	4	14.4	1
10.7	4	14.5	1
10.8	4	14.6	1
10.9	3	14.7	1
11.0	2	14.8	1
11.1	2	14.9	1
11.2	1	15.0	1
11.3	1	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	1	15.5	1
11.8	1	15.6	1
11.9	1	15.7	1
12.0	1	15.8	1
12.1	1	15.9	1
12.2	1	16.0	1
12.3	1	16.1	1
12.4	1	16.2	1
12.5	1	16.3	1

12.6
12.7

1
1

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-10.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	0
16.7	1	20.5	0
16.8	1	20.6	0
16.9	1	20.7	0
17.0	1	20.8	0
17.1	1	20.9	0
17.2	1	21.0	0
17.3	1	21.1	0
17.4	1	21.2	0
17.5	1	21.3	0
17.6	1	21.4	0
17.7	1	21.5	0
17.8	1	21.6	0
17.9	1	21.7	0
18.0	1	21.8	0
18.1	1	21.9	0
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	0	22.8	0
19.1	0	22.9	0
19.2	0	23.0	0
19.3	0	23.1	0
19.4	0	23.2	0
19.5	0	23.3	0
19.6	0	23.4	0
19.7	0	23.5	0
19.8	0	23.6	0
19.9	0	23.7	0
20.0	0	23.8	0
20.1	0	23.9	0
20.2	0		
20.3	0		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
 Watershed file: --> 95003\95003D .MOP
 Hydrograph file: --> 95003\E-25.HYD

95003 ECTS-Scenic Technologies
 New Windsor Facility
 Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.00	8.50	8.26	I0 .10
3-Rub bldg site	0.45	94.0	0.10	0.00	8.50	7.78	I.02 .10
4-east parking	1.31	54.0	0.30	0.00	8.50	3.02	I.2 .20
5-so.parking	0.94	91.0	0.10	0.00	8.50	7.42	I.02 .10
7-west parking	1.00	87.0	0.20	0.00	8.50	6.94	I.04 .10

* Travel time from subarea outfall to composite watershed outfall point.
 I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.41 acres or 0.01002 sq.mi
 Peak discharge = 31 cfs

WARNING: Drainage areas of two or more subareas
 differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.00	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.27	0.00	0.30	0.00	Yes	--
5-so.parking	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1
7-west parking	0.20	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
 Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	18	10.1
3-Rub bldg site	3	10.1
4-east parking	2	10.2
5-so.parking	5	10.1
7-west parking	4	10.1
Composite Watershed	31	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	2	6	12	18	11	5	4
3-Rub bldg site	0	0	0	1	2	3	2	1	1
4-east parking	0	0	0	0	1	1	2	2	1
5-so.parking	0	0	1	2	4	5	4	2	1
6-west parking	0	0	1	1	2	4	4	3	2
Total (cfs)	1	1	4	10	21	31	23	13	9

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	4	3	3	3	2	2	2	2	2
3-Rub bldg site	1	1	0	0	0	0	0	0	0
4-east parking	1	1	1	1	0	0	0	0	0
5-so.parking	1	1	1	1	1	1	1	1	1
7-west parking	1	1	1	1	1	1	1	1	1
Total (cfs)	8	7	6	6	4	4	4	4	4

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	2	2	2	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	1	1	0	0	0	0	0	0	0
7-west parking	1	1	0	0	0	0	0	0	0
Total (cfs)	4	4	2	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	2
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	2	13.2	1
9.5	3	13.3	1
9.6	4	13.4	1
9.7	6	13.5	1
9.8	8	13.6	1
9.9	10	13.7	1
10.0	21	13.8	1
10.1	31	13.9	1
10.2	23	14.0	1
10.3	13	14.1	1
10.4	9	14.2	1
10.5	8	14.3	1
10.6	7	14.4	1
10.7	6	14.5	1
10.8	6	14.6	1
10.9	5	14.7	1
11.0	4	14.8	1
11.1	4	14.9	1
11.2	4	15.0	1
11.3	4	15.1	1
11.4	4	15.2	1
11.5	4	15.3	1
11.6	4	15.4	1
11.7	4	15.5	1
11.8	4	15.6	1
11.9	4	15.7	1
12.0	4	15.8	1
12.1	4	15.9	1
12.2	4	16.0	1
12.3	4	16.1	1
12.4	3	16.2	1
12.5	3	16.3	1

12.6
12.7

2
2

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-25.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.00	6.50	6.26	I.01 .10
3-Rub bldg site	0.45	94.0	0.10	0.00	6.50	5.79	I.02 .10
4-east parking	1.31	54.0	0.30	0.00	6.50	1.73	I.26 .26
5-so.parking	0.94	91.0	0.10	0.00	6.50	5.45	I.03 .10
7-west parking	1.00	87.0	0.20	0.00	6.50	5.00	I.05 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.41 acres or 0.01002 sq.mi
Peak discharge = 22 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.00	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.27	0.00	0.30	0.00	Yes	--
5-so.parking	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1
7-west parking	0.20	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	13	10.1
3-Rub bldg site	2	10.1
4-east parking	1	10.2
5-so.parking	4	10.1
7-west parking	3	10.1
Composite Watershed	22	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	1	5	9	13	9	4	3
3-Rub bldg site	0	0	0	1	1	2	1	1	0
4-east parking	0	0	0	0	0	0	1	1	1
5-so.parking	0	0	0	1	3	4	3	1	1
7-west parking	0	0	0	1	2	3	3	2	1
Total (cfs)	1	1	1	8	15	22	17	9	6

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	3	2	2	2	2	2	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	1	0	0	0	0	0	0	0	0
5-so.parking	1	1	1	1	1	0	0	0	0
7-west parking	1	1	1	1	1	0	0	0	0
Total (cfs)	6	4	4	4	4	2	1	1	1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	1	1	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
7-west parking	0	0	0	0	0	0	0	0	0
Total (cfs)	1	1	1	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	1
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	1	13.2	1
9.5	1	13.3	1
9.6	1	13.4	1
9.7	3	13.5	1
9.8	6	13.6	1
9.9	8	13.7	1
10.0	15	13.8	1
10.1	22	13.9	1
10.2	17	14.0	1
10.3	9	14.1	1
10.4	6	14.2	1
10.5	6	14.3	1
10.6	4	14.4	1
10.7	4	14.5	1
10.8	4	14.6	1
10.9	4	14.7	1
11.0	4	14.8	1
11.1	3	14.9	1
11.2	2	15.0	1
11.3	2	15.1	1
11.4	1	15.2	1
11.5	1	15.3	1
11.6	1	15.4	1
11.7	1	15.5	1
11.8	1	15.6	1
11.9	1	15.7	1
12.0	1	15.8	1
12.1	1	15.9	1
12.2	1	16.0	1
12.3	1	16.1	1
12.4	1	16.2	1
12.5	1	16.3	1

12.6
12.7

1
1

16.4
16.5

1
1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-50.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-100.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
1-main building	2.71	98.0	0.10	0.00	8.00	7.76	I.01 .10
3-Rub bldg site	0.45	94.0	0.10	0.00	8.00	7.28	I.02 .10
4-east parking	1.31	54.0	0.30	0.00	8.00	2.68	I.21 .21
5-so.parking	0.94	91.0	0.10	0.00	8.00	6.92	I.02 .10
7-west parking	1.00	87.0	0.20	0.00	8.00	6.45	I.04 .10

Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 6.41 acres or 0.01002 sq.mi
Peak discharge = 30 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
1-main building	0.10	0.00	**	**	No	Computed Ia/p < .1
3-Rub bldg site	0.10	0.00	**	**	No	Computed Ia/p < .1
4-east parking	0.27	0.00	0.30	0.00	Yes	--
5-so.parking	0.13	0.00	0.10	0.00	No	Computed Ia/p < .1
7-west parking	0.20	0.00	**	**	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-100.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

>>>> Summary of Subarea Times to Peak <<<<

Subarea	Peak Discharge at Composite Outfall (cfs)	Time to Peak at Composite Outfall (hrs)
1-main building	17	10.1
3-Rub bldg site	3	10.1
4-east parking	2	10.3
5-so.parking	5	10.1
7-west parking	4	10.1
Composite Watershed	30	10.1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00

Watershed file: --> 95003\95003D .MOP

Hydrograph file: --> 95003\E-100.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	9.0 hr	9.3 hr	9.6 hr	9.9 hr	10.0 hr	10.1 hr	10.2 hr	10.3 hr	10.4 hr
1-main building	1	1	2	6	11	17	11	5	4
3-Rub bldg site	0	0	0	1	2	3	2	1	1
4-east parking	0	0	0	0	0	1	1	2	1
5-so.parking	0	0	1	2	3	5	3	2	1
6-west parking	0	0	1	1	2	4	4	3	2
Total (cfs)	1	1	4	10	18	30	21	13	9

Subarea Description	10.5 hr	10.6 hr	10.7 hr	10.8 hr	11.0 hr	11.2 hr	11.4 hr	11.6 hr	11.8 hr
1-main building	4	3	3	2	2	2	2	2	2
3-Rub bldg site	1	0	0	0	0	0	0	0	0
4-east parking	1	1	1	1	0	0	0	0	0
5-so.parking	1	1	1	1	1	1	1	1	1
7-west parking	1	1	1	1	1	1	1	1	1
Total (cfs)	8	6	6	5	4	4	4	4	4

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)

Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-100.HYD

95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Composite Hydrograph Summary (cfs)

Subarea Description	12.0 hr	12.3 hr	12.6 hr	13.0 hr	13.5 hr	14.0 hr	14.5 hr	15.0 hr	15.5 hr
1-main building	2	2	1	1	1	1	1	1	1
3-Rub bldg site	0	0	0	0	0	0	0	0	0
4-east parking	0	0	0	0	0	0	0	0	0
5-so.parking	0	0	0	0	0	0	0	0	0
7-west parking	1	0	0	0	0	0	0	0	0
Total (cfs)	3	2	1	1	1	1	1	1	1

Subarea Description	16.0 hr	17.0 hr	18.0 hr	20.0 hr	24.0 hr
1-main building	1	1	1	1	0
3-Rub bldg site	0	0	0	0	0
4-east parking	0	0	0	0	0
5-so.parking	0	0	0	0	0
7-west parking	0	0	0	0	0
Total (cfs)	1	1	1	1	0

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-100.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
9.0	1	12.8	1
9.1	1	12.9	1
9.2	1	13.0	1
9.3	1	13.1	1
9.4	2	13.2	1
9.5	3	13.3	1
9.6	4	13.4	1
9.7	6	13.5	1
9.8	8	13.6	1
9.9	10	13.7	1
10.0	18	13.8	1
10.1	30	13.9	1
10.2	21	14.0	1
10.3	13	14.1	1
10.4	9	14.2	1
10.5	8	14.3	1
10.6	6	14.4	1
10.7	6	14.5	1
10.8	5	14.6	1
10.9	4	14.7	1
11.0	4	14.8	1
11.1	4	14.9	1
11.2	4	15.0	1
11.3	4	15.1	1
11.4	4	15.2	1
11.5	4	15.3	1
11.6	4	15.4	1
11.7	4	15.5	1
11.8	4	15.6	1
11.9	4	15.7	1
12.0	3	15.8	1
12.1	3	15.9	1
12.2	2	16.0	1
12.3	2	16.1	1
12.4	2	16.2	1
12.5	1	16.3	1

TR-55 TABULAR HYDROGRAPH METHOD
Type I.T Distribution
(24 hr. Duration Storm)Executed: 08-22-1996 13:36:00
Watershed file: --> 95003\95003D .MOP
Hydrograph file: --> 95003\E-100.HYD95003 ECTS-Scenic Technologies
New Windsor Facility
Developed

Time (hrs)	Flow (cfs)	Time (hrs)	Flow (cfs)
16.6	1	20.4	1
16.7	1	20.5	1
16.8	1	20.6	1
16.9	1	20.7	1
17.0	1	20.8	1
17.1	1	20.9	1
17.2	1	21.0	1
17.3	1	21.1	1
17.4	1	21.2	1
17.5	1	21.3	1
17.6	1	21.4	1
17.7	1	21.5	1
17.8	1	21.6	1
17.9	1	21.7	1
18.0	1	21.8	1
18.1	1	21.9	1
18.2	1	22.0	0
18.3	1	22.1	0
18.4	1	22.2	0
18.5	1	22.3	0
18.6	1	22.4	0
18.7	1	22.5	0
18.8	1	22.6	0
18.9	1	22.7	0
19.0	1	22.8	0
19.1	1	22.9	0
19.2	1	23.0	0
19.3	1	23.1	0
19.4	1	23.2	0
19.5	1	23.3	0
19.6	1	23.4	0
19.7	1	23.5	0
19.8	1	23.6	0
19.9	1	23.7	0
20.0	1	23.8	0
20.1	1	23.9	0
20.2	1		
20.3	1		



1763
July 22, 1996

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553
Telephone: (914) 563-4615
Fax: (914) 563-4693

Mt. Ellis Paper Company
Gateway Industrial Park
New Windsor, NY 12553

ATTENTION: CY KAPLOWITZ

SUBJECT: GATEWAY INDUSTRIAL PARK DRAINAGE IMPROVEMENTS

Dear Cy:

In line with our recent discussions, enclosed herewith are copies of the design plan for the subject improvements, as prepared by Shaw Engineering. Please note that the plan has been revised to address comments from our office, including the change of the channel bottom surface from a grassed swale to a rip-rap channel. It is our belief that this finish will provide a finished improvement which will require the least maintenance.

Also please note that the drainage channel design is, in our opinion, consistent with the design report previously prepared by Greg Shaw, P.E., which was also forwarded to you for your review and was the subject of discussion with your engineers at several meetings.

Please provide any comments regarding this design plan to us as soon as possible as there are pending applications before the Planning Board which are effected by this matter. You should contact Mr. Helmer directly regarding any easement issues.

Thank you for your continued attention to this matter. If you have any questions or would like to further discuss the improvements or plan, please do not hesitate to contact the undersigned at 562-8640.

Very truly yours,

Mark J. Edsall, P.E.
Mark J. Edsall, P.E., *cm*
Planning Board Engineer

cc: George J. Meyers, Supervisor
James R. Petro, Jr., P.B. Chairman

Shaw Engineering

Consulting Engineers

744 Broadway
P.O. Box 2569
Newburgh, New York 12550
[914] 561-3695

July 22, 1996

Chairman James Petro and
Members of the Planning Board
TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, New York 12550

Re: Storm Drainage Improvements For Gateway International Subdivision
Wembly Road

Gentlemen:

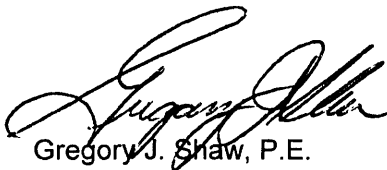
Enclosed please find 10 sets of the drawings entitled "Storm Water Management Plan - Storm Drainage Improvements For Gateway International Subdivision" which were prepared by this office and which are dated June 10, 1996. These drawings contain a latest revision date of July 19, 1996 and consist of 2 sheets.

My client would appreciate being placed on the next available agenda of the Planning Board.

Thank you for your attention to this matter.

Respectfully submitted,

SHAW ENGINEERING



Gregory J. Shaw, P.E.
Principal

GJS:mmv
Enclosure

cc William Helmer, P.E.



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.

ECTS

- ☐ Main Office
45 Quassaick Ave. (Route 9W)
New Windsor, New York 12553
(914) 562-8640
- ☐ Branch Office
400 Broad Street
Milford, Pennsylvania 18337
(717) 296-2765

PLANNING BOARD WORK SESSION
RECORD OF APPEARANCE

1-3

TOWN/VILLAGE OF New Windsor

P/B # -

WORK SESSION DATE: 5 Feb 97

APPLICANT RESUB.
REQUIRED: Later

REAPPEARANCE AT W/S REQUESTED: later

PROJECT NAME: ECTS S/P Ann.

PROJECT STATUS: NEW 6 OLD

REPRESENTATIVE PRESENT: Bill Squin; Mike Woj.

MUNIC REPS PRESENT: BLDG INSP. around
FIRE INSP. X
ENGINEER X
PLANNER
P/B CHMN.
OTHER (Specify)

ITEMS TO BE ADDRESSED ON RESUBMITTAL:

17x100 office addition (in between buildings)

lookw, @ more spaces, advice of 9x19
and possible restriping

advise him if he wants variance # @ spaces
it is NYS codes Bureau -

PLANNING BOARD
TOWN OF NEW WINDSOR

AS OF: 04/03/97

PAGE: 1

LISTING OF PLANNING BOARD ACTIONS

STAGE:

STATUS [Open, Withd]
A [Disap, Appr]

FOR PROJECT NUMBER: 95-12

NAME: ECTS - SCENIC TECHNOLOGIES

APPLICANT: ECTS - SCENIC TECHNOLOGIES

DATE	MEETING-PURPOSE	ACTION-TAKEN
03/24/97	PLANS STAMPED	APPROVED
10/09/96	P.B. APPEARANCE	ND: APPROVED
10/02/96	WORK SESSION APPEARANCE	NEXT AGENDA
09/25/96	P.B. APPEARANCE	TO RETURN
	. CORRECT CALCULATIONS FOR DRAINAGE - RETURN	
04/10/96	P.B. APPEARANCE	RETURN TO W.S.-L.A.
	. REVISE PLAN - MARKS COMMENTS - DRAINAGE - LIGHTING - RETURN	
	. TO WORK SHOP - WHEN MARK APPROVES, SCHEDULE P.H.	
04/03/96	WORK SESSION APPEARANCE	REVISE & SUBMIT
01/17/96	WORK SESSION APPEARANCE	REVISE & RET TO W.S
07/26/95	P.B. APPEARANCE	RETURN TO W.S.
03/22/95	P.B. APPEARANCE	REFER TO Z.B.A.
	. SEND REVISED PLAN TO Z.B.A.	
03/15/95	WORK SESSION APPEARANCE	SUBMIT APPLICATION

PLANNING BOARD
TOWN OF NEW WINDSOR

AS OF: 04/03/97

PAGE: 1

LISTING OF PLANNING BOARD AGENCY APPROVALS

FOR PROJECT NUMBER: 95-12

NAME: ECTS - SCENIC TECHNOLOGIES
APPLICANT: ECTS - SCENIC TECHNOLOGIES

	DATE-SENT	AGENCY-----	DATE-RECD	RESPONSE-----
REV3	09/17/96	MUNICIPAL HIGHWAY	09/18/96	APPROVED
REV3	09/17/96	MUNICIPAL WATER	09/18/96	APPROVED
REV3	09/17/96	MUNICIPAL SEWER	/ /	
REV3	09/17/96	MUNICIPAL FIRE	09/17/96	APPROVED
REV2	04/03/96	MUNICIPAL HIGHWAY	04/13/96	APPROVED
REV2	04/03/96	MUNICIPAL WATER	04/08/96	APPROVED
REV2	04/03/96	MUNICIPAL SEWER	04/12/96	approved
REV2	04/03/96	MUNICIPAL FIRE	04/04/96	APPROVED
REV1	07/21/95	MUNICIPAL HIGHWAY	04/03/96	SUPERSEDED BY REV2
REV1	07/21/95	MUNICIPAL WATER	07/28/95	APPROVED
REV1	07/21/95	MUNICIPAL SEWER	04/03/96	SUPERSEDED BY REV2
REV1	07/21/95	MUNICIPAL FIRE	07/31/95	APPROVED
REV1	07/21/95		04/03/96	SUPERSEDED BY REV2
REV1	07/21/95		04/03/96	SUPERSEDED BY REV2
ORIG	03/16/95	MUNICIPAL HIGHWAY	04/18/95	APPROVED
ORIG	03/16/95	MUNICIPAL WATER	03/16/95	APPROVED
ORIG	03/16/95	MUNICIPAL SEWER	07/21/95	SUPERSEDED BY REV1
ORIG	03/16/95	MUNICIPAL FIRE	03/16/95	APPROVED
ORIG	03/16/95		07/21/95	SUPERSEDED BY REV1
ORIG	03/16/95		07/21/95	SUPERSEDED BY REV1

PLANNING BOARD
TOWN OF NEW WINDSOR

AS OF: 04/03/97

PAGE: 1

LISTING OF PLANNING BOARD SEQRA ACTIONS

FOR PROJECT NUMBER: 95-12

NAME: ECTS - SCENIC TECHNOLOGIES

APPLICANT: ECTS - SCENIC TECHNOLOGIES

	DATE-SENT	ACTION-----	DATE-RECD	RESPONSE-----
ORIG	03/16/95	EAF SUBMITTED	03/16/95	WITH APPLICATION
ORIG	03/16/95	CIRCULATE TO INVOLVED AGENCIES	/ /	
ORIG	03/16/95	LEAD AGENCY DECLARED	04/10/96	TOOK LEAD AGENCY
ORIG	03/16/95	REQUEST FOR INFORMATION	/ /	
ORIG	03/16/95	DECLARATION (POS/NEG)	10/09/96	DECL. NEG DEC

PLANNING BOARD
TOWN OF NEW WINDSOR

AS OF: 01/21/97

PAGE: 1

LISTING OF PLANNING BOARD FEES
ESCROW

FOR PROJECT NUMBER: 95-12

NAME: ECTS - SCENIC TECHNOLOGIES
APPLICANT: ECTS - SCENIC TECHNOLOGIES

--DATE--	DESCRIPTION-----	TRANS	--AMT-CHG	-AMT-PAID	--BAL-DUE
03/16/95	REC. CK. #29024	PAID		750.00	
03/22/95	P.B. ATTY. FEE	CHG	35.00		
03/22/95	P.B. MINUTES	CHG	40.50		
07/26/95	P.B. ATTY. FEE	CHG	35.00		
07/26/95	P.B. MINUTES	CHG	40.50		
04/10/96	P.B. ATTY. FEE	CHG	35.00		
04/10/96	P.B. MINUTES	CHG	45.00		
07/24/96	P.B. ATTY. FEE	CHG	35.00		
07/24/96	P.B. MINUTES	CHG	31.50		
09/25/96	P.B. ATTY. FEE	CHG	35.00		
09/25/96	P.B. MINUTES	CHG	22.50		
10/09/96	P.B. ATTY. FEE	CHG	35.00		
10/09/96	P.B. MINUTES	CHG	9.00		
01/13/97	P.B. ENGINEER FEE	CHG	2216.50		
01/21/97	REC. CK. #27791	PAID		1865.50	
TOTAL:			2615.50	2615.50	0.00

1-15-97 Have fee amounts
to Bill Squires

SITE PLAN FEES - TOWN OF NEW WINDSOR
(INCLUDING SPECIAL PERMIT)

APPLICATION FEE:.....\$ 100.00 *Pl*

* * * * *

ESCROW:

SITE PLANS (\$750.00 - \$2,000.00).....\$ *Pl*

MULTI-FAMILY SITE PLANS:

 UNITS @ \$100.00 PER UNIT (UP TO 40 UNITS)....\$
 UNITS @ \$25.00 PER UNIT (AFTER 40 UNITS)....\$
TOTAL ESCROW PAID:.....\$

* * * * *

PLAN REVIEW FEE: (EXCEPT MULTI-FAMILY) \$ 100.00 *(3)*

PLAN REVIEW FEE (MULTI-FAMILY): A. \$100.00
PLUS \$25.00/UNIT B.

TOTAL OF A & B: \$

RECREATION FEE: (MULTI-FAMILY)

\$500.00 PER UNIT

 @ \$500.00 EA. EQUALS: \$
NUMBER OF UNITS

SITE IMPROVEMENT COST ESTIMATE: \$ 635,128.00

2% OF COST ESTIMATE \$ EQUALS \$ 12,702.56 *(1)*

TOTAL ESCROW PAID:.....\$

TO BE DEDUCTED FROM ESCROW:

RETURN TO APPLICANT: \$

ADDITIONAL DUE: \$ 1865.50 *(2)*



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

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WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
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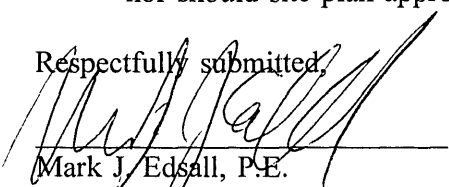
TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS

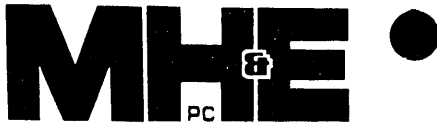
REVIEW NAME: ECTS-SCENIC TECHNOLOGIES SITE PLAN
PROJECT LOCATION: TEMPLE HILL (FREEDOM) ROAD (ROUTE 300)
SECTION 3-BLOCK 4-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 25 SEPTEMBER 1996
DESCRIPTION: THE APPLICATION INVOLVES A PROPOSED CHANGE IN
OCCUPANCY FOR THE FORMER BOSS GLASS BUILDING,
AS WELL AS A PROPOSED NEW BUILDING AND VARIOUS
SITE IMPROVEMENTS. THE PLAN WAS PREVIOUSLY
REVIEWED AT THE 22 MARCH 1995, 26 JULY 1995 AND 10
APRIL 1996 PLANNING BOARD MEETINGS.

1. The Applicant has attended several Technical Work Sessions regarding this project. As well, several additional conferences have been held with regard to the site drainage issue. The Applicant's Engineer has attempted to address all previous engineering review comments.

At this time, the only significant outstanding issue is resolving the drainage evaluation for the project. Our latest comment sheet with regard to this issue is attached hereto. This matter has not yet been resolved and, as such, the SEQRA review cannot be completed, nor should site plan approval be considered at this time.

Respectfully submitted,


Mark J. Edsall, P.E.
Planning Board Engineer
MJEmk
A:ECTS2.mk



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

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TOWN OF NEW WINDSOR
PLANNING BOARD
DRAINAGE REVIEW COMMENTS

PROJECT NAME: ECTS SCENIC TECHNOLOGIES
PROJECT LOCATION: NEW YORK STATE ROUTE 300
WEMBLEY ROAD
PROJECT REPRESENTATIVE: WILLIAM C. SQUIRES, P.E.
PREPARATION DATE: 19 SEPTEMBER 1996

The following comments are based on a review of a Drainage Report prepared for the subject project dated 27 August 1996 with no revision date. The basis of the report is that a detention facility will be developed in the rear paved parking lot to control post development runoff predevelopment runoff rates. Based on a review of the submitted report, our comments are as follows:

1. A review of the report reveals that under existing and developed conditions the computer models which are provided show that peak stormwater runoff rates for the storms modeled increase until the 25 year storm event, then for the 50 and 100 year storm events, a decrease in peak flow rates is identified.
2. A review of the computer model submitted reveals that the precipitation quantity utilized for the 5, 10, 25, 50 and 100 year storm events are incorrect. Information provided in the Appendix to the report contains the peak runoff rate in inches for 24 hour storm events, however, these peak runoff rates are not utilized in the calculations. The 25 year storm event in the computer generated models identifies 8.5" of rainfall. This rainfall is in excess of what would typically be encountered during a 100 year storm event in the north Atlantic region. The computer models need to be adjusted to reflect the correct runoff rates such that an accurate model of the site can be developed.
3. The use of the parking area as a detention facility requires a outlet control structure in this case a catch basin grate. The catch basin grate proposed should be provided for review to determine the peak runoff rates which will be conveyed through the catch basin grates under the headwater conditions expected to be generated in the parking lot while it is being utilized as a detention facility.

TOWN OF NEW WINDSOR
PLANNING BOARD
DRAINAGE REVIEW COMMENTS

PROJECT NAME: ECTS SCENIC TECHNOLOGIES
PROJECT LOCATION: NEW YORK STATE ROUTE 300
WEMBLEY ROAD
PROJECT REPRESENTATIVE: WILLIAM C. SQUIRES, P.E.
PREPARATION DATE: 19 SEPTEMBER 1996

Page Two

Please revise the above referenced items as soon as possible such that the drainage report can be in a form acceptable to the Town Planning Board.

Respectfully submitted,



Patrick J. Hines
Senior Engineer

PJHsh

a:squires.sh

ECTS SITE PLAN (95-12) ROUTE 300

Mr. William Squires appeared before the board for this proposal.

MR. SQUIRES: Hopefully, we're here tonight for the, will be the last time.

MR. PETRO: You don't like seeing us?

MR. SQUIRES: I enjoy it but I think we're probably getting tired looking at each other's faces for a while.

MR. PETRO: Okay.

MR. SQUIRES: Well, as far as I'm concerned, had a number of meetings with Pat Hines from Mark's office and we went through some gyrations to develop a retention pond out of the parking lot to the west along the parking lot between the buildings and indeed got the volume to a point where the runoff from the site is as it was prior to our development and that the retention would only last a hundred year storm, would only last approximately an hour before it would, that too would drain out and maintain itself. So we're not creating a long term ponding effect. Mark, I guess am I accurate in saying that we're in agreement there?

MR. EDSALL: I think that Pat and yourself, Bill, have agreed to a concept by itself, my understanding I said that Bill and Pat had agreed to a concept but there was comments issued back out of our office on the 19th of September apparently there's still problems with the calculations as they are submitted.

MR. PETRO: Did you have a meeting today to discuss some of this?

MR. EDSALL: No there have been several meetings between Bill and Pat Hines from my office and I don't disagree that they have come to a conclusion as to the best approach and in concept agree that that appears to be something that would work but at this point, the calculations don't bear that out, there's some

incorrect information in the calculations and at this point, we're really not in a position to tell you we have an acceptable report.

MR. SQUIRES: That is quite news to me. I wouldn't be standing here if I had thought otherwise. My meeting with Pat Hines when I left that I was under the impression--

MR. EDSALL: You have not gotten the comments dated the 19th of September?

MR. SQUIRES: No.

MR. LANDER: Mr. Squires, we have here that one of his comments was that the use of a parking area as detention in a site, which parking area would that be?

MR. SQUIRES: That is parking area between the two buildings, large parking area.

MR. LANDER: Where the portable building is going to go, you're using that as a detention area?

MR. SQUIRES: Yes.

MR. LANDER: Underground detention area?

MR. SQUIRES: No, surface, pitching it to the existing drains.

MR. LANDER: So it is not a detention area?

MR. SQUIRES: Retention, I'm sorry, I get mixed up, we're detaining it, not retaining it, we're detaining it for a period of time so--

MR. LANDER: What would that period be?

MR. SQUIRES: Once it fills up, it will be within an hour on a hundred year storm to return itself back.

MR. LANDER: So I would take it there's curbing that is alongside this or is it just that is something new?

MR. PETRO: Just to recap, you have all the zoning requirements met, I know you went to the zoning board, on request of this board, all the bulk tables are correct, Mark?

MR. EDSALL: Yes.

MR. PETRO: Also for the minutes, we have highway approval on 9/18/96, water 9/18/96 and fire 9/17/96. Other than the drainage, Mark, do we have any other outstanding problems or comments that you want to put forth at this time?

MR. EDSALL: No, as my comments have indicated, there's been an attempt to address all the previous comments and some of the comments are quite moot at this point, since the construction is already completed in some of the areas, I had questions about so I'm not going to revise the comments that are here.

MR. PETRO: Completed to the satisfaction of the board?

MR. EDSALL: Completed in construction.

MR. PETRO: Yes.

MR. EDSALL: We haven't done a final field review but some of the questions had to do with how they'd accomplish certainly grading and they have apparently solved that out in the field as far as what questions I had as far as the drawings relative to actual construction.

MR. DUBALDI: That is different than what we have on the map right now?

MR. EDSALL: No, I wouldn't say that it may be that the contractor just interpellated between one elevation and another and blended the areas together. I'm not saying it's a problem, just saying I'm not going to do any review on areas that have already been constructed. It doesn't make sense.

MR. PETRO: Only outstanding problem is the drainage and that is the drainage going down Wembly Road and

they are working on that with other people, aren't you?

MR. EDSALL: It's the site drainage in its entirety and that has to be resolved before you can close out the SEQRA process and then obviously then you can look at site plan approval.

MR. PETRO: Why hasn't it been resolved?

MR. SQUIRES: As far as I'm concerned, it was, I have not seen the comments that Mark is talking about.

MR. PETRO: Comments from what, the last meeting?

MR. SQUIRES: Well, from September 19th.

MR. EDSALL: September 19 is when, here's a copy, I was under the impression unless something happened with the mail, they were mailed out to my knowledge right after they were generated.

MR. PETRO: Mr. Squires, let's not spend more time on it, only for one simple reason, we're not going to go forward, we can't close out the SEQRA process, there's no sense in going forward. Get ahold of Mark's comments, review it, get the drainage fixed up and I don't see there's nothing else. Gentlemen, is there anything else?

MR. LANDER: No, nothing else.

MR. PETRO: We have looked at it so many times.

MR. LANDER: Part of problem was that rather than go through the normal process of meeting at the work shop to make sure that everything was done, they came right here so there was no ability at the workshop to say no, there's still a problem so I think last Wednesday we would have known not to have him on the agenda if we had gotten together.

MR. PETRO: Why did you not know about the workshop, just didn't know there was any problems?

MR. EDSALL: We just assumed it was all taken care of.

MR. SQUIRES: I met with Pat Hines at their office, we reviewed everything in detail, including the drainage report and the revised drawings, as you have them right now, and as far as I'm concerned, I left there feeling that things were done.

MR. EDSALL: What day was the meeting?

MR. SQUIRES: Boy, Mark, I think it was about a week before the 19th, around the 12th.

MR. EDSALL: But you haven't submitted anything new since the 19th, that maybe I'm not aware of.

MR. SQUIRES: No, I haven't submitted anything at all since the 19th.

MR. EDSALL: That was last Thursday.

MR. PETRO: And you haven't had time to review whether he submitted it or not is going to be immaterial. He needs time to review it and get back to the board.

MR. EDSALL: Why don't you take this in case the mail is going to hold hostage the comments. Everything is done except for the drainage, unless we can close out the SEQRA process, no sense in going forward.

MR. DUBALDI: Which we can't until we get a determination on the drainage.



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.**

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MEMORANDUM

8 January 1997

TO: MYRA MASON, PLANNING BOARD SECRETARY

FROM: MARK J. EDSALL, P.E., PLANNING BOARD ENGINEER

SUBJECT: FOTS SITE PLAN - SITE IMPROVEMENTS ESTIMATE
NW PB NO. 95-12

I have reviewed the revised site improvements cost estimate dated 8 November 1996, revised and resubmitted on 8 January 1997.

The revised total value for the cost estimate is \$635,128.

Please be advised that I accept this estimate as submitted.

A copy of our time printout for the project is attached hereto.

MJL/st
doc: sbr

AS OF: 01/08/97

PAGE: 1

CHRONOLOGICAL JOB STATUS REPORT

JOB: 87-56 NEW WINDSOR PLANNING BOARD (Chargeable to Applicant)

CLIENT: NEWWIN - TOWN OF NEW WINDSOR

TASK: 95- 12

FOR WORK DONE PRIOR TO: 01/08/97

										-----DOLLARS-----			
TASK-NO	REC	--DATE--	TRAN	EMPL	ACT	DESCRIPTION-----	RATE	HRS.	TIME	EXP.	BILLED	BALANCE	
95-12	75842	03/15/95	TIME	MJE	WS	ECTS	70.00	0.50	35.00				
95-12	76246	03/21/95	TIME	MJE	MC	ECTS	70.00	0.60	42.00				
95-12	75950	03/22/95	TIME	MJE	MM	DISAPP > ZBA	70.00	0.10	7.00				
95-12	76050	03/22/95	TIME	MCK	CL	E/RVW COMMENTS	25.00	0.50	12.50				

										96.50			
95-12	76455	03/31/95				BILL 95-294 4/5/95 PD						-96.50	

												-96.50	
95-12	80738	06/08/95	TIME	MJE	PM	ECTS	70.00	0.40	28.00				
95-12	80739	06/08/95	TIME	MJE	MC	ECTS ZBA REFERRAL	70.00	0.50	35.00				

										63.00			
95-12	81151	06/30/95				BILL 95-446 7/11/95 PD						-63.00	

												-63.00	
95-12	82953	07/19/95	TIME	MJE	MC	ECTS RVW	70.00	1.00	70.00				
95-12	82495	07/25/95	TIME	MCK	CL	ECTS RVW COMMENTS	25.00	0.50	12.50				

										82.50			
95-12	86343	09/30/95				BILL 95-658 10/6/95 PD						-82.50	

												-82.50	
95-12	89889	11/13/95	TIME	MJE	MC	EAST COAST W/BI	70.00	0.40	28.00				
95-12	89890	11/13/95	TIME	MJE	PM	EAST COAST W/ENGR	70.00	0.40	28.00				
95-12	89032	11/14/95	TIME	MCK	CL	LTR-ECTS	25.00	0.50	12.50				
95-12	89893	11/21/95	TIME	MJE	MC	ECTS DRAINAGE	70.00	0.40	28.00				

										96.50			
95-12	90696	11/30/95				BILL 95-757 12/14/95 PD						-96.50	

												-96.50	
95-12	90604	12/12/95	TIME	MJE	MC	ECTS W/RDM	70.00	0.20	14.00				
95-12	90986	12/21/95	TIME	MJE	MC	ECTS-CALLS TO ENGR	70.00	0.20	14.00				
95-12	91324	12/26/95	TIME	MJE	MC	BOSS GLASS PROP	70.00	0.20	14.00				
95-12	91333	12/29/95	TIME	MJE	MC	ECTS	70.00	0.30	21.00				

										63.00			
95-12	91652	12/31/95				BILL 96-134 1/12/96 PD						-63.00	

												-63.00	

AS OF: 01/08/97

PAGE: 2

CHRONOLOGICAL JOB STATUS REPORT

JOB: 87-56 NEW WINDSOR PLANNING BOARD (Chargeable to Applicant)

CLIENT: NEWWIN - TOWN OF NEW WINDSOR

TASK: 95- 12

FOR WORK DONE PRIOR TO: 01/08/97

										-----DOLLARS-----			
TASK-NO	REC	--DATE--	TRAN	EMPL	ACT DESCRIPTION-----	RATE	HRS.	TIME	EXP.	BILLED	BALANCE		
95-12	92545	01/02/96	TIME	MJE	MC ECTS/TC SQUIRES	70.00	0.40	28.00					
95-12	92548	01/03/96	TIME	MJE	PM ECTS/SQUIRES/MEYERS	70.00	0.60	42.00					
95-12	92640	01/17/96	TIME	MJE	WS ECTS	70.00	0.80	56.00					
95-12	93129	01/22/96	TIME	MJE	MC ECTS DRAINAGE	70.00	0.30	21.00					
95-12	93071	01/23/96	TIME	MCK	CL ECTS LTR	25.00	0.50	12.50					
95-12	93130	01/23/96	TIME	MJE	MC ECTS DRAINAGE	70.00	0.20	14.00					
										173.50			
95-12	93570	01/31/96			BILL 96-165 2/12/96 PD					-173.50			
											-173.50		
95-12	93555	02/02/96	TIME	MJE	MC ECTS	70.00	0.40	28.00					
95-12	95566	03/01/96	TIME	MJE	OC ECTS	70.00	0.50	35.00					
95-12	96481	03/04/96	TIME	MCK	CL MEMO-ETCS DRAINAGE	25.00	0.50	12.50					
95-12	96920	03/22/96	TIME	MJE	MC ECTS	70.00	0.20	14.00					
95-12	97448	03/25/96	TIME	MJE	MC ECTS	70.00	0.30	21.00					
										110.50			
95-12	97826	03/31/96			BILL 96-277 4/1//96 PD					-110.50			
											-110.50		
95-12	99370	04/02/96	TIME	MJE	MC ECTS ISSUE W/SUPV	70.00	0.10	7.00					
95-12	99372	04/03/96	TIME	MJE	WS ECTS	70.00	0.40	28.00					
95-12	98435	04/04/96	TIME	MCK	CL FCTS/RVW COMMENTS	25.00	0.50	12.50					
95-12	99378	04/04/96	TIME	MJE	MC ECTS	70.00	0.80	56.00					
										103.50			
95-12	00658	04/30/96			BILL 96-356 5/14/96 PD					-103.50			
											-103.50		
95-12	05731	06/12/96	TIME	PJH	MR ECTS DRAINAGE REVIEW	70.00	3.00	210.00					
95-12	05733	06/12/96	TIME	SAS	CL ECTS RVW COMMENTS	25.00	1.00	25.00					
95-12	05732	06/14/96	TIME	PJH	MR ECTS DRAINAGE REVIEW	70.00	1.00	70.00					
										305.00			
95-12	06317	06/30/96			BILL 96-493 7/15/96 PD					-305.00			
											-305.00		
95-12	06745	07/03/96	TIME	PJH	MR ECTS	70.00	2.00	140.00					
95-12	06814	07/11/96	TIME	PJH	MC ECTS	70.00	2.00	140.00					
95-12	07743	07/11/96	TIME	MJE	PM ECTS @ T/H	70.00	0.50	35.00					
										315.00			

AS OF: 01/08/97

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CHRONOLOGICAL JOB STATUS REPORT

JOB: 87-56 NEW WINDSOR PLANNING BOARD (Chargeable to Applicant)

CLIENT: NEWWIN - TOWN OF NEW WINDSOR

TASK: 95- 12

FOR WORK DONE PRIOR TO: 01/08/97

TASK-NO	REC	--DATE--	TRAN	EMPL	ACT	DESCRIPTION-----	RATE	HRS.	TIME	EXP.	BILLED	BALANCE
95-12	09407	07/31/96				BILL 96-560 8/6/96 PD					-315.00	
											-315.00	
95-12	10034	08/13/96	TIME	MJE	MC	ECTS W/PJH	70.00	0.30	21.00			
95-12	11590	08/26/96	TIME	PJH	MR	ECTS	70.00	2.00	140.00			
95-12	11593	08/27/96	TIME	PJH	MR	ECTS	70.00	1.00	70.00			
95-12	12325	09/10/96	TIME	PJH	MR	ECTS DRAINAGE	70.00	2.00	140.00			
95-12	13349	09/18/96	TIME	PJH	MR	ECTS DRAINAGE	70.00	2.00	140.00			
95-12	13911	09/24/96	TIME	MJE	MC	ECTS	70.00	0.40	28.00			
95-12	12808	09/25/96	TIME	MCK	CL	ECTS-COMMENTS	25.00	0.50	12.50			
									551.50			
95-12	15428	09/30/96				BILL 96-709 10/15/96 PD					-551.50	
											-551.50	
95-12	14006	10/02/96	TIME	MJE	WS	ECTS	70.00	0.40	28.00			
95-12	14082	10/03/96	TIME	SAS	CL	ECTS-COMMENTS	25.00	0.50	12.50			
95-12	14312	10/08/96	TIME	PJH	MC	ECTS DRAINAGE	70.00	1.00	70.00			
95-12	13797	10/09/96	TIME	MJE	MM	ECTS FINAL APPL	70.00	0.10	7.00			
95-12	14655	10/09/96	TIME	MCK	CL	ECTS COMMENTS	25.00	0.50	12.50			
95-12	15832	10/09/96	TIME	MJE	MC	ECTS	70.00	0.80	56.00			
									186.00			
95-12	17591	10/31/96				BILL 96-792 11/13/96					-186.00	
											-186.00	
95-12	17815	11/05/96	TIME	MJE	MC	ECTS LTR SQUIRES	70.00	0.40	28.00			
95-12	21370	01/08/97	TIME	MJE	MC	FINAL REVIEW & XO\=\	70.00	0.60	42.00			
						TASK TOTAL			2216.50	0.00	-2146.50	70.00
						GRAND TOTAL			2216.50	0.00	-2146.50	70.00

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer

P.B. #95-12

14 Ashwood Terrace
Newburgh, NY 12550
(914) 561-3299
Fax (914) 569-3911

Finger Lakes Office
4779 East Lake Road
Geneva, NY 14456
(315) 585-9549

November 8, 1996

Mrs. Myra Mason
Planning Board Secretary
Planning Board - Town of New Windsor
555 Union Avenue
New Windsor, NY 12550

Re: ECTS - Scenic Technologies
Estimate of site plan costs
WCS No. 95003

Dear Myra:

The estimated cost of site improvements is \$635,128. The breakdown of costs is listed below.

Landscaping	Trees	lump sum	24,855
	Bushes	lump sum	6,152
	Ground Cover	lump sum	14,271
Storm Drainage	8 catch basins	lump sum	10,400
	648 lf sht drain	lump sum	15,210
	4,000 lf pipe	lump sum	69,300
	180 lf trench drain	lump sum	23,325
Asphalt Paving	122,000 sf	\$1.319/sf	160,390
Concrete Curb	1,100 lf	\$18.00/lf	19,800
Sidewalk	4,000 sf	\$5.00/sf	20,000
Retaining Walls	648 lf	\$418.87/lf	<u>271,425</u>
TOTAL			<u>\$635,128</u>

Sincerely,



William C. Squires, P.E.
W. C. Squires Consulting Engineer
WCS/js

Received 1/8/97 @

OK by mark
by phone
1/8/97



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.**

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
JAMES M. FARR, P.E.

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507 Broad Street
Milford, Pennsylvania 18337
(717) 296-2765

6 November 1996

William C. Squires, P.E.
11 Ashwood Terrace
Newburgh, New York 12550

ATTENTION: ECTS SITE PLAN
 SITE PLAN IMPROVEMENT ESTIMATE
 NEW WINDSOR P.B. NO. 95-12

Dear Mr. Squires:

I have received a copy of your letter dated 3 November 1996 to Myra Mason in connection with the subject matter. Please be advised that the format of your estimate is unacceptable. A detailed breakdown which itemizes specific items, their unit cost, quantities, extended prices and total improvement cost is the format accepted by the Town Planning Board.

Please resubmit your estimate in the proper form.

Very truly yours,

**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS, P.C.**

A handwritten signature in cursive script, reading 'Mark J. Edsall', is written over a horizontal line.

Mark J. Edsall, P.E.
Planning Board Engineer

MJesh

cc: James Petro, Planning Board Chairman

a:ects11-6.sh

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer

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November 8, 1996

Mrs. Myra Mason
Planning Board Secretary
Planning Board - Town of New Windsor
555 Union Avenue
New Windsor, NY 12550

Re: ECTS - Scenic Technologies
Estimate of site plan costs
WCS No. 95003

Dear Myra:

The estimated cost of site improvements is \$785,750. The breakdown of costs is listed below.

Earthwork	14,800 cy	\$14.284/cy	\$211,400
Storm Drainage			
	8 catch basins	lump sum	10,400
	648 lf sht drain	lump sum	15,210
	4,000 lf pipe	lump sum	69,300
Trench Drains	180 lf	lump sum	23,325
Sewage Ejector	one	lump sum	24,300
Asphalt Paving	122,000 sf	\$1.319/sf	160,390
Retaining Walls	648 lf	\$418.87/lf	<u>271,425</u>
TOTAL			<u>\$785,750</u>

Sincerely,



William C. Squires, P.E.
W. C. Squires Consulting Engineer
WCS/js

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer

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Newburgh, NY 12550
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November 3, 1996

Mrs. Myra Mason
Planning Board Secretary
Planning Board - Town of New Windsor
555 Union Avenue
New Windsor, NY 12550

Re: ECTS - Scenic Technologies
Estimate of site plan costs
WCS No. 95003

Dear Myra:

The estimated cost of site improvements is \$785,750. This includes earthwork, storm drainage, trench drains, sewage ejector, asphalt paving, retaining walls and curbs.

Sincerely,



William C. Squires, P.E.
W. C. Squires Consulting Engineer

WCS/js

11/5/96 Mark sent
Response



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
JAMES M. FARR, P.E.

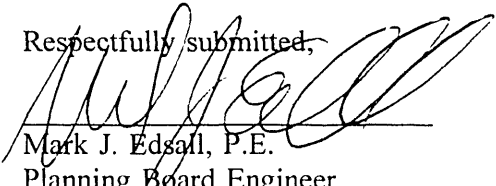
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TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS

REVIEW NAME: ECTS-SCENIC TECHNOLOGIES SITE PLAN
PROJECT LOCATION: TEMPLE HILL (FREEDOM) ROAD (ROUTE 300)
SECTION 3-BLOCK 4-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 9 OCTOBER 1996
DESCRIPTION: THE APPLICATION INVOLVES A PROPOSED CHANGE IN
OCCUPANCY FOR THE FORMER BOSS GLASS BUILDING,
AS WELL AS A PROPOSED NEW BUILDING AND VARIOUS
SITE IMPROVEMENTS. THE PLAN WAS PREVIOUSLY
REVIEWED AT THE 22 MARCH 1995, 26 JULY 1995,
10 APRIL 1996 AND 25 SEPTEMBER 1996 PLANNING
BOARD MEETINGS.

1. At this time, I believe all previously discussed technical concerns have been resolved with regard to this project.
2. It is my recommendation that the Planning Board adopt a Negative Declaration under SEQRA for this project.
3. At this time I am aware of no reason why the Planning Board could not consider site plan approval for the project.

Respectfully submitted,


Mark J. Edsall, P.E.
Planning Board Engineer
MJEmk
A:ECTS3.mk

ECTS SITE PLAN (95-12) RT. 300

Mr. William Squires appeared before the board for this proposal.

MR. PETRO: You were here at the last meeting, we had to clarify the drainage, is that correct?

MR. SQUIRES: Clarify the drainage. I got together with Mark in a workshop session last week and as far as I know, we have, we're in agreement with Mark, everything is complete.

MR. PETRO: Mark, is there anything outstanding at this point?

MR. EDSALL: No, the drainage report is acceptable, I believe we already previously noted everything else had been completed. My suggestion is to adopt a negative dec and if you agree, look at site plan approval.

MR. PETRO: We reviewed this I think quite a number of times, I know you went back to the zoning board, got a couple variances some time ago and they are put on the map where they belong. All the members have reviewed this a number of times. Is there any outstanding aspects of this plan that any of the members want to discuss any further? And we'll need a motion for--

MR. DUBALDI: Make a motion we declare negative dec.

MR. STENT: Second it.

MR. PETRO: Motion has been made and seconded that the New Windsor Planning Board declare negative dec under SEQRA process for the ECT site plan on Route 32. Is there any further discussion from the board members? If not, roll call.

ROLL CALL

MR. DUBALDI	AYE
MR. STENT	AYE
MR. LUCAS	AYE
MR. PETRO	AYE

MR. DUBALDI: Mark, you don't have any comments?

MR. EDSALL: No, the balance of the items have been taken care of in advance. The only outstanding issue is the drainage and Bill's straightened that out.

MR. LUCAS: Building really looks good.

MR. PETRO: We do have highway approval on 9/18/96 and we have water approval on 9/18/96 and fire approval on 9/17/96.

MR. DUBALDI: I don't see any reason to hold it up any longer. Make a motion we grant final approval to the ECTS site plan.

MR. LUCAS: Second it.

MR. PETRO: Motion has been made and seconded that the New Windsor Planning Board grant final approval for the ECTS Scenic site plan on Route 300. Is there any further discussion from any of the board members? Do you want to add anything?

MR. SQUIRES: No.

ROLL CALL

MR. DUBALDI	AYE
MR. STENT	AYE
MR. LUCAS	AYE
MR. PETRO	AYE

RESULTS OF P.B. MEETING

DATE: October 9, 1996

PROJECT NAME: _____ PROJECT NUMBER _____

* * * * *

LEAD AGENCY: _____ NEGATIVE DEC: _____

M) _____ S) _____ VOTE: A _____ N _____ M) 0 S) 11 VOTE: A 4 N 0

CARRIED: YES _____ NO _____ CARRIED: YES: ☒ NO _____

* * * * *

PUBLIC HEARING: M) _____ S) _____ VOTE: A _____ N _____

WAIVED: YES _____ NO _____

SEND TO OR. CO. PLANNING: M) _____ S) _____ VOTE: A _____ N _____ YES _____ NO _____

SEND TO DEPT. OF TRANSPORT: M) _____ S) _____ VOTE: A _____ N _____ YES _____ NO _____

DISAPP: REFER TO Z.B.A.: M) _____ S) _____ VOTE: A _____ N _____ YES _____ NO _____

RETURN TO WORK SHOP: YES _____ NO _____

APPROVAL:

M) _____ S) _____ VOTE: A _____ N _____ APPROVED: _____

M) 0 S) 5 VOTE: A 4 N 0 APPR. CONDITIONALLY: 10-9-96

NEED NEW PLANS: YES _____ NO _____

DISCUSSION/APPROVAL CONDITIONS: _____



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.

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PLANNING BOARD WORK SESSION
RECORD OF APPEARANCE

TOWN/VILLAGE OF

New Windsor

P/B #

95-12

WORK SESSION DATE:

2 Oct 96

APPLICANT RESUB.
REQUIRED:

REAPPEARANCE AT W/S REQUESTED:

No

Revised plans

PROJECT NAME:

ECTS

PROJECT STATUS:

NEW

OLD

x

REPRESENTATIVE PRESENT:

Bill Squires, John

MUNIC REPS PRESENT: BLDG INSP.

FIRE INSP.

ENGINEER

PLANNER

P/B CHMN.

OTHER (Specify)

ITEMS TO BE ADDRESSED ON RESUBMITTAL:

Wed aft or Fri AM w/ Drainage Gr

Add to 10/9 agenda

4MJE91 pbwsform

RESULTS OF P.E. MEETING

DATE: September 25, 1996

PROJECT NAME: ELTS PROJECT NUMBER 95-12

LEAD AGENCY: * NEGATIVE DEC:
*
M) ___ S) ___ VOTE: A ___ N ___ * M) ___ S) ___ VOTE: A ___ N ___
*

CARRIED: YES ___ NO ___ * CARRIED: YES: ___ NO ___
*

PUBLIC HEARING: M) ___ S) ___ VOTE: A ___ N ___

WAIVED: YES ___ NO ___

SEND TO OR. CO. PLANNING: M) ___ S) ___ VOTE: A ___ N ___ YES ___ NO ___

SEND TO DEPT. OF TRANSPORT: M) ___ S) ___ VOTE: A ___ N ___ YES ___ NO ___

DISAPP: REFER TO Z.E.A.: M) ___ S) ___ VOTE: A ___ N ___ YES ___ NO ___

RETURN TO WORK SHOP: YES ___ NO ___

APPROVAL:

M) ___ S) ___ VOTE: A ___ N ___ APPROVED: _____

M) ___ S) ___ VOTE: A ___ N ___ APPR. CONDITIONALLY: _____

NEED NEW PLANS: YES ___ NO ___

DISCUSSION/APPROVAL CONDITIONS: _____

Calculations are incorrect for drainage
See Letter from Pat Hines dated 9-19-96 in file
to Return



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
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12 September 1996

Shaw Engineering
744 Broadway
Newburgh, New York 12550

ATTENTION: GREGORY SHAW, P.E.

SUBJECT: GATEWAY INDUSTRIAL PARK DRAINAGE IMPROVEMENTS
COMMENTS FROM MT. ELLIS ENGINEER
MHE JOB NO.

Dear Greg:

Attached hereto please find a letter dated 10 September 1996 from Tectonic Engineering Consultants, P.C., the Engineer for Mt. Ellis Paper Company, Inc. As per our previous discussions, Mt. Ellis was given the opportunity to provide technical review comments for the drainage improvements plan based on both their proximity to the improvements and, as well, the obvious need for Bill Helmer to obtain an expanded easement from Mt. Ellis for the construction of the improvements.

Please review the Tectonic letter and prepare a response letter to the Town. If you wish to discuss this matter or any specific comment in the Tectonic letter before issuance of your response, please do not hesitate to contact the undersigned.

Very truly yours,

McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS, P.C.

Mark J. Edsall, P.E.
Town Consulting Engineer
MJesh

cc: George J. Meyers, Town Supervisor
James Petro, Planning Board Chairman
William Helmer
a:shaw.sh

Mt. Ellis Paper Co.
Wembly Road
Gateway Industrial Park
P.O. Box 4083
New Windsor, NY 12553

ATTN: Jim LaRusso

September 10, 1996

RE: WO# 1820.01
COMMENTS FOR GATEWAY INTERNATIONAL
DRAINAGE IMPROVEMENTS

Dear Jim:

After a review of the proposed Stormwater Management Plan and Drainage Report provided by Shaw Engineering, the following comments were compiled addressing potential impacts to Mt. Ellis.

1. It appears that the proposed 18" storm drain located on the easterly side of the loading dock area will back up and flood the loading area to an elevation of 273.65. During the 50 year storm event this equates to approximately 0.85 feet (10 in.) of water in the parking lot.
2. It is recommended that hydraulic computations be performed for the sizing of the aforementioned proposed 18" storm drain. From the information provided it appears that the pipes have been designed to function at slopes of 0.27% (nearly level). It should be determined that these pipes have been sized adequately to prevent even further backup of runoff, and from a maintenance stand point, that adequate water velocity is maintained within the pipe to prevent sediment buildup. We recommend that a drainage pipe with this minimal slope be constructed of reinforced concrete or another material that will reduce frictional resistance inside the pipe.
3. As shown the proposed drainage improvements will be rerouting a substantial amount of runoff that presently discharges downstream of an existing drainage structure located within Silver Stream to a point upstream of same. This drainage structure consists of three corrugated metal arch culverts measuring 42" x 64". Hydrologic and hydraulic computations should be performed to verify that this structure is adequately sized to take the added flow. In addition the maintenance of this structure appears to be an important issue. Based on a site

inspection by this office, on August 29, 1996 it was found that a substantial amount of debris, (trees, branches, garbage, etc.) had collected at the inlet of this structure. The failure of this structure to function properly will have a severe effect on the performance of the proposed improvements. It is recommend that the maintenance of this structure be included in the maintenance agreements being provided for the proposed improvements.

Please feel free to contact us with any questions, comments or request that you may have in the resolving of this issue.

Sincerely,



Donald A. Benvie, P.E.
Managing Principal

DT
File 4/182001.doc

RESULTS OF P.E. MEETING

DATE: 7-24-96

PROJECT NAME: ECTS Site Plan PROJECT NUMBER 95-12

LEAD AGENCY:

NEGATIVE DEC:

M) S) VOTE: A N

M) S) VOTE: A N

CARRIED: YES NO

CARRIED: YES: NO

PUBLIC HEARING: M) 0 S) 5 VOTE: A 5 N 0

WAIVED: YES ✓ NO

SEND TO OR. CO. PLANNING: M) S) VOTE: A N YES NO

SEND TO DEPT. OF TRANSPORT: M) S) VOTE: A N YES NO

DISAPP: REFER TO Z.E.A.: M) S) VOTE: A N YES NO

RETURN TO WORK SHOP: YES NO

APPROVAL:

M) S) VOTE: A N APPROVED:

M) S) VOTE: A N APPR. CONDITIONALLY:

NEED NEW PLANS: YES NO

DISCUSSION/APPROVAL CONDITIONS:

(M) 0 (S) 5 TO Rescind motion for P.H.

(M) 0 (S) 5 Waive P.H. 5 Ayes

0 Nay

REGULAR ITEMS:

ECTS SITE PLAN (95-12) ROUTE 300

William Squires appeared before the board for this proposal.

MR. PETRO: Why are you here?

MR. SQUIRES: My main purpose was to discuss whether or not we can waive the public hearing for the planning board meeting, as per request.

MR. PETRO: Right, I remember, yes, you're here for an amended site plan. You're before the board on the whole project, on an amended site plan, correct?

MR. SQUIRES: Correct, just to bring you all up to date now, the only thing that is still left as an open issue is how to control the site drainage so that we don't exceed our pre-development runoff and we have gone through some gyrations and discussions with people over at Mark Edsall's office and going through another iteration where now basically I'm going to attempt to gain some storage in that parking lot that is between the two buildings so that the runoff will be reduced and not have that problem. It's a tight situation and I think everybody's aware of the difficulty of it.

MR. PETRO: Most of the drainage is in at this time, correct?

MR. SQUIRES: Yeah, but we need to retain some of it so we don't have such a surge going out under the worst storm conditions and I think it's one of the things I just feel obligated to mention to you is we have been going back and forth with Mark's office and in a good manner cause I want to do some things and Mark's group said no, you have got to do it a little differently and it's been good, I think it's their approach has been in the public interest and I wanted to point that out.

MR. PETRO: Just to clarify what we're really looking at tonight I think we did ask you to come in for this particular reason, gentlemen, we're still going to look

at the site plan at another meeting, correct, and he was concerned about a timeframe for a public hearing and I didn't want to make that determination myself, obviously, so I felt that we'd bring him before the board, he can state his case and poll the board to see how they felt about a public hearing. That is the main reason he's here.

MR. STENT: Public helping hearing for?

MR. PETRO: For amended site plan, obviously the site plan has had a public hearing, you went to the zoning board, did you not?

MR. SQUIRES: Once. One of the reason were approaching you about trying to get a waiver on that is that when we went to the zoning board for a public hearing on all the variances that we needed, the only person or group of any sort that showed up was our next door neighbor who showed us because he was concerned about not having any traffic out there. Nothing to do with the site, kind of a global concern he had.

MR. DUBALDI: Phil Crotty.

MR. SQUIRES: The wash basin just south and on the other side. His concern was a viable one between himself and UPS coming out.

MR. LUCAS: Phil's two more parcels up.

MR. PETRO: But you feel that his concerns were taken care of?

MR. SQUIRES: Not really concerns about ECTS, the whole global situation around the area and parking.

MR. PETRO: What variances were granted for the site? I remember you went for the building, the side yard and the one building, correct?

MR. SQUIRES: What's granted was a side yard variance for here, for this on the north side for the little out building cause that was--

MR. LUCAS: Is that where the loading ramp is next to that?

MR. SQUIRES: Yes, there was a variance also given for the side yard on the south, there's also a variance given for the front yard on 300.

MR. LUCAS: They are all granted.

MR. PETRO: So at the public hearing, he was the only one?

MR. SQUIRES: He was the only person, everybody else showed up was from ECTS.

MR. LANDER: We never had a public hearing on this site.

MR. PETRO: The planning board has not, no. Ron, I don't know about the original site plan, I'm sure there was a public hearing, the original site plan, Mike, do you recollect that?

MR. BABCOCK: Yes, there was.

MR. PETRO: This is amended site plan coming back now.

MR. LUCAS: When you say original site plan, Isulpane?

MR. BABCOCK: Yes, when they put the two additions on the side, some of the board members remember, I don't know whether or not anybody was here when they did that.

MR. LANDER: I was here.

MR. BABCOCK: They put up the wooden fence on the side and they were putting the crates and stuff in it out in the front and the board was upset about that where they put the new loading dock in.

MR. LANDER: Well, I remember I put these two buildings or steel 50 by 75 on each end of the building.

MR. BABCOCK: That is correct.

MR. LANDER: Without a building permit or anything else so.

MR. PETRO: That has all been rectified now?

MR. LANDER: Right.

MR. SQUIRES: There was or there is I guess an approved site plan that goes back to the addition or the expansion of the main building and the addition of the long skinny building in the back.

MR. BABCOCK: I think this site plan, Ron, this site plan is mainly to clean up what the prior owner did without the approvals.

MR. LANDER: My only question is whether or not we need a public hearing for this.

MR. PETRO: Ron, to go one step further what you're talking about the board on April 10 meeting, did vote to have a public hearing, this board April 10 this year again they are here to ask us to reconsider that in light of the public hearing at the zoning board and the nature of the amended site plan and the reason it was not scheduled since the April 10 meeting is because of the holdup with the drainage and Mark is reviewing that.

MR. LUCAS: But the zoning board there was only one person that attended from the public?

MR. SQUIRES: Yes.

MR. LUCAS: What difference, I mean I know it's planning, but why would we expect more people to show up because it's planning?

MR. BABCOCK: It was for the same application, Mike, this plan was in front of the zoning board.

MR. PETRO: You know my feeling on that, if we have something at zoning board and comes to us within a short period, I feel that we do not need a public

hearing.

MR. LUCAS: Right and I think everybody in that neighborhood is enjoying the upgrade of what they are doing to the building.

MR. STENT: Is the detention pond put in here?

MR. SQUIRES: I haven't put it on yet because we're going back and forth with Mark's office, just finetuning, making sure that we're acceptable to him.

MR. STENT: What about with the other drainage?

MR. SQUIRES: We're trying to retain as much as we can now so we're not exceeding what was before the improvements, particularly the park lot improvements that are going in right now, the paving and what I am saying our latest consideration is to do a little rework on the parking lot between the two to swale it, to make it into a bit of a pond and use then the storm sewer.

MR. DUBALDI: I rescind my original motion for a public hearing, I believe I was the one that made the motion for the public hearing at the April 10 meeting so I therefore rescind my motion for a public hearing and I put it back on the floor, if we want to waive the public hearing. Ron?

MR. LANDER: I normally don't like to waive public hearings.

MR. DUBALDI: For this we just had a public hearing on it or the zoning board did.

MR. SQUIRES: There is one other comment to you and that site plan is not going to go forward from my perspective unless I'm in compliance or agreement with McGoey, Hauser and Edsall, so I said earlier I really feel truly that they are looking out for the town's interest.

MR. BABCOCK: The drainage is pretty much--

MR. SQUIRES: In bypassing this, we're not going to have something going on that is going to be lesser in quality than what work--

MR. BABCOCK: The drainage is somewhat a separate issue and everybody on that whole project knows that nobody's going anywhere until that drainage is resolved. We have had interior meetings with Bill, with Mark, with myself, with Greg Shaw that is representing Mr. Helmer and everybody's been advised as far as Mt. Ellis, everybody.

MR. PETRO: Well, I think we have obviously you're coming back again with the site plan just we're trying to get passed this one item. I think what we can do if we can have a motion and then we can go to discussion during the motion afterwards if there's any further discussion?

MR. DUBALDI: I make that motion that we waive the public hearing.

MR. STENT: Second it.

MR. PETRO: Motion has been made and seconded to waive the public hearing.

ROLL CALL

MR. DUBALDI	AYE
MR. STENT	AYE
MR. LANDER	AYE
MR. LUCAS	AYE
MR. PETRO	AYE

MR. PETRO: I think we have accomplished--is there any other items you want us to look at?

MR. LUCAS: Did Mr. Edsall have any concerns or comments about that?

MR. SQUIRES: No, we had a discussion about it in his office about ten days ago and he knew we were coming here.

June 24, 1996

8

MR. PETRO: I think it's been progressing nicely, the entire project, and I know everyone has a pretty good handle on the drainage. I haven't heard any negative comments from anyone passing by or anyone in the town so we appreciate the nice job that you are doing there and hope to see you here again to finalize the site plan.

MR. SQUIRES: I hope next time I see you will be the last time, not that I don't like to see you.

MR. PETRO: We'll remember you said that. Thank you.



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

**NEW WINDSOR PLANNING BOARD MEETING
TOWN HALL
WEDNESDAY, JULY 24, 1996 - 7:30 P.M.**

TENTATIVE AGENDA

***CALL TO ORDER
ROLL CALL***

REGULAR ITEMS:

1. ECTS Site Plan (95-12) Rt. 300 (Squires)
2. O.C. Poughkeepsie MSA, Ltd. Site Plan & Special Permit (96-11)
Dean Hill Road (Rosenberg)

CORRESPONDENCE

DISCUSSION

ADJOURNMENT

(NEXT MEETING - AUGUST 14, 1996)



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
JAMES M. FARR, P.E.

- ☐ **Main Office**
45 Quassaick Ave. (Route 9W)
New Windsor, New York 12553
(914) 562-8640
- ☐ **Branch Office**
507 Broad Street
Milford, Pennsylvania 18337
(717) 296-2765

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS**

REVIEW NAME: O.C. POUGHKEEPSIE MSA, LP
PROJECT LOCATION: NYNEX MOBILE PHONE FACILITY
OFF DEAN HILL ROAD
SECTION 65-BLOCK 1-LOT 17
PROJECT NUMBER: 96-11
DATE: 24 JULY 1996
DESCRIPTION: THE APPLICATION INVOLVES A PROPOSED NYNEX COMMUNICATIONS FACILITY TO INCLUDE AN EQUIPMENT BUILDING AND TOWER. THE PLAN WAS PREVIOUSLY REVIEWED AT THE 24 APRIL 1996 PLANNING BOARD MEETING, AT WHICH TIME SAME WAS REFERRED TO THE ZONING BOARD OF APPEALS FOR NECESSARY VARIANCES.

1. To my understanding, the Applicant has received all necessary variances from the Zoning Board of Appeals relative to the site plan submitted. This includes a variance granted for the construction of the 160' communications tower, and a variance for street frontage.

The record should be clear and the Planning Board should be aware that (to my understanding) only two (2) variances have been granted for this application. The variances required is based on the "proposed" bulk values for the overall parcel, not the Lease parcel. This is important to understand since the Lease parcel (if submitted as a "stand alone" site plan lot) would require at least eight (8) variances. I am commenting on this for the record since the consideration of this plan, based on the overall parcel, effectively "commits" the overall parcel until such time that further Planning Board and/or Zoning Board action occurs. I trust the property owner is aware that the application before the Board effects the total parcel. The Board may wish to verify this understanding and insure that the Applicant has all necessary proxy forms on record.

2. My previous review comments sheets suggested that the Applicant be required to provide appropriate documentation (deeds, etc.) to verify access via the right-of-way from Dean Hill Road. I trust the Planning Board Attorney has reviewed these documents and finds same acceptable, since adequate access must be in existence, since the parcel is land locked.

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS
PAGE 2**

REVIEW NAME: O.C. POUGHKEEPSIE MSA, LP
NYNEX MOBILE PHONE FACILITY
PROJECT LOCATION: OFF DEAN HILL ROAD
SECTION 65-BLOCK 1-LOT 17
PROJECT NUMBER: 96-11
DATE: 24 JULY 1996

3. The Planning Board has received a Short Environmental Assessment Form for the project. To my understanding, the Planning Board has not declared themselves Lead Agency or taken any other SEQRA action. Relative to SEQRA, the Board should consider the following:
 - a. Lead Agency - The Board should determine if they are the only approving agency relative to this application. The only two (2) other possibilities which I believe are possible are the possible need for FAA approval relative to the proximity to Stewart International Airport and the possible review by the Orange County Department of Health or New York State Department of health of the fuel storage for the generator in proximity to the public drinking water supply.
 - b. If it is established that the Planning Board is Lead Agency, they must consider if a Short EAF is acceptable, or if a Full EAF or EIS is necessary.
4. One issue just discussed at the previous meeting which is not addressed on this site plan is the type of fuel utilized for the standby generator, as well as the details of the storage facilities. Secondary containment for fuel would also appear appropriate if petroleum type products are involved. The Planning Board should request this information on the plan.
5. The Planning Board should schedule the mandatory **Public Hearing** for this **Special Permit**, per the requirements of Paragraph 48-35(A) of the Town Zoning Local Law.
6. At such time that the Planning Board has made further review of this application, **further engineering reviews** and comments will be made, as deemed necessary by the Board.

Respectfully submitted,



Mark J. Edsall, P.E.
Planning Board Engineer
MJEmk
A:OC2.mk



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

June 10, 1996

William Squires
11 Ashwood Terrace
Newburgh, NY 12550

Re: Tax Map Parcel #4-3-10.12
Freedom Road Realty Assoc.

Dear Mr. Squires:

According to our records, the attached list of property owners are abutting property owners and owners across any street.

The charge for this service is \$35.00, minus your deposit of \$25.00, leaves a balance due of \$10.00.

Sincerely,

Leslie Cook
LESLIE COOK
Sole Assessor

/po
Attachment

cc: Myra Mason

J&H Smith Light Corp.
PO Box 1449
Newburgh, NY 12550

Roseto, Nicholas
RR 1, Thorn Lot Rd.
Stockholm, NJ 07460

August Associates, Inc.
PO Box 829
Wappingers Falls, NY 12590

Lois, Eugene
PO Box 201
LaGrangeville, NY 12540

The Coca-Cola Bottling Co. of NY, Inc.
c/o Charles J. Smith
20 Horseneck Lane
Greenwich, CT 06830

Granuzzo, Anthony
dba Gamma Realty
Lincoln Rd.
Putnam Valley, NY 10579

HZ Development Partners
Wembly Rd.
New Windsor, NY 12553

Helmer, William F.
Grey Beech Lane
Pomona, NY 10970

Rosa, Wilson & Maricelis
628 Union Ave.
New Windsor, NY 12553

Ronsini, Mario & Ruth
630 Union Ave.
New Windsor, NY 12553

Rossi, Olympia
52 Balmville Rd.
Newburgh, NY 12550

Angeloni, Americo & Rose
326 Temple Hill Rd.
New Windsor, NY 12553

Ronsini, Nicholas A. Sr. & Rose
322 Temple Hill Rd.
New Windsor, NY 12553

April 10, 1996

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REGULAR ITEMS:

ECTS SITE PLAN (95-12) ROUTE 300

Mr. William Squires appeared before the board for this proposal.

MR. PETRO: Why don't you recap why you're here?

MR. SQUIRES: I'll point out a few changes that kind of evolved over the period, some architectural effects, bring you up to date. Number one, ECTS has been architecturally developing a more attractive entry area in the front and choosing a system using a system called Cal-wall (phonetic), which is a translucent and opaque fiberglass panel, give it more like an office building type of an entrance and it's about up, it's going to extend for 50 foot across the front here and then along the side of the building for about 80 feet on either side to make it more professional and less manufacturing in its appearance.

MR. LUCAS: That was where the existing entrance was?

MR. SQUIRES: Exact same location, yes, but it's just, it took a while to develop, the shape is almost parabolic in nature and there was a lot of architectural involvement with that. Also, and part of the, one of the changes was to the back parking lot was lowered two feet in order to reduce the amount of fill that was required to create it and create a level area seep the drainage across the parking lot and into the area where the temporary building is going to be situated. Other than that, we have, I have met with Mark and would he agree that we have a few things we need to get together, particularly one is to revise the drainage study that I have developed to be I guess in my mind more compatible with the needs that are going on right now in terms of the fact that the town is going through an overall evaluation of the drainage in the area and I want to get my data to be more useful to that overall process and I didn't have time to make the revisions since the workshop session last week.

MR. PETRO: You have not had time?

MR. SQUIRES: No, that was one of our agreements. I guess the other thing Mark was, I have electrical lighting shown with just a one candle power outline and Mark feels that it would be better for everybody's understanding if it had the multiple lighting candle power charts for each light so you get a chance to see where it fades out and I need to add that on there. I have held back doing that right now because I'm in the process of waiting to receive a computer program which actually will develop the lighting and develop the charts which hopefully give us some nice mapping we have also and there's a last sheet.

MR. LUCAS: What's the period of operation time-wise?

MR. SQUIRES: Normally, well, Orestes Mihaly, he's from East Coast, he is here, maybe you can answer that question.

MR. MIHALY: The normal hours of operation are from 7 in the morning to 6:30 at night. We tend to do, tend to work quite a bit overtime so there's always someone there maybe till 8 or something like that.

MR. SQUIRES: But there's occasions--

MR. MIHALY: There's occasions because of the shoe schedule we have to go maybe three months working till ten o'clock at night or something like that but we try and maintain a reasonable hour.

MR. DUBALDI: Mark, are you happy with the drainage shown on the site plan?

MR. EDSALL: As Bill indicated, there was some suggestions that I made and some other corrections that I went over with Bill. Right now, the major item which is missing for drainage is the study that would identify for us any increase in the discharge rate from the site because that information will go hand in hand with the information that we have requested from Mr. Helmer to address the area-wide problem.

MR. SQUIRES: Under special circumstances of our nasty

winter and some of the flooding problems that have started to occur east of us across Route 300, we were granted permission and rebuilt the 36 inch line from the DOT manhole on back to mitigate the problem that was occurring.

MR. DUBALDI: I don't have to tell you what the situation is with flooding there, you're very well aware, it's very bad.

MR. SQUIRES: That was a nasty time when we had that snow melt. Anyway, that has been constructed under agreement of myself, Mark and the town supervisor.

MR. PETRO: Mr. Squires, I see on the first page here you have the variances that were granted on August 14, 1995 which was front yard, front yard, building height and 134 parking spaces, what about the variances, Mike, maybe you can shed some light on this for the building that was on Wembly Road side remember he was too close there. Was there any variances for front yard or setbacks?

MR. SQUIRES: For this.

MR. BABCOCK: No, Mr. Chairman, in the bulk tables depending on the use of the building, one setback was required to be a hundred feet and one setback was required to be 50 feet.

MR. SQUIRES: They are all a hundred in this case.

MR. BABCOCK: No, your requirement is 50 foot setback.

MR. PETRO: Well, you remember that we had a stop work order issued on that because of the site too close to the road.

MR. BABCOCK: Well, actually we issued that because they were building it without the permit.

MR. PETRO: They didn't need a variance for it, I see it's 54 feet from the road so.

MR. BABCOCK: Well, there's two uses. One use is

required at a hundred foot and we weren't quite sure which use we should use on this project and we had clarified that at one of the meetings prior.

MR. LANDER: So Mike, at this point in time, do they have a C.O. for that?

MR. BABCOCK: Excuse me, maybe I'm wrong.

MR. EDSALL: There were two front yard variances granted, correct?

MR. SQUIRES: Well, yes, I was confused by this too and Mark helped me get straightened out but you have got a building now you can't consider as three separate buildings, it's one structure, number one and there were variances needed in two locations, one here off of temple Hill and another one off of Wembly.

MR. LANDER: Temple Hill was created by the state when they widened the road.

MR. SQUIRES: But it was an issue.

MR. PETRO: I'm still talking about the one on the south end of the building.

MR. BABCOCK: Mr. Chairman, I have to correct myself. What happened was is that we needed to clarify what variance they need, whether they need relief from a hundred or 50 foot, we did that and they need a relief from 50 and they sought both of those reliefs and got them. So they do have a variance on the front setback on the east end and on the west end of the building.

MR. PETRO: The second variance is relief from both the west and south sides or the north and south sides, see there's two of them.

MR. DUBALDI: Are you talking about Wembly Road or Wembly Road Extension?

MR. PETRO: Wembly Road Extension is the one that Mr. Squires says.

April 10, 1996

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MR. DUBALDI: Which one?

MR. PETRO: I'm talking about the one on the south.

MR. DUBALDI: Wembly Road?

MR. PETRO: Yes.

MR. SQUIRES: One on the south was never requiring a variance because it's in back of the 50 foot offset line.

MR. PETRO: To answer my question, what I am thinking about didn't have a building permit, it had nothing to do with the variances required.

MR. BABCOCK: That is correct.

MR. PETRO: So that issue is done, thank you.

MR. LANDER: Was that for both that addition on the north side and the south side?

MR. BABCOCK: That is correct.

MR. LUCAS: They weren't part of the original structure?

MR. BABCOCK: No.

MR. LANDER: They put these on without a building permit and occupied them, that was a work garage the north end.

MR. SQUIRES: South end had a shell up additionally.

MR. LUCAS: Are they separate? Is there openings or is it all--

MR. SQUIRES: They are open from the inside, they are open.

MR. PETRO: The big tanks that are on the property have they been removed? There was some gas and oil tanks.

MR. MIHALY: The tanks, the gas tank that was buried in the ground near the south building has been removed. The tanks that are behind the rear building will be removed that are above ground just sitting there.

MR. PETRO: The wood frame structure is going to be removed?

MR. MIHALY: That is gone.

MR. PETRO: Your map should say that, you're going to have to make some changes anyway, it says existing wood frame shed to be removed, just say removed. In other words, anything that you have completed or it doesn't exist, it's gone.

MR. SQUIRES: At this point in time, okay, that is good.

MR. PETRO: Same with the tanks, I don't know if you have anything on the map, I see it in here but underground fuel storage tank pump to be removed.

MR. SQUIRES: I'll take it off.

MR. PETRO: Remove it from the plan.

MR. SQUIRES: Okay.

MR. PETRO: I think we should do number 3.

MR. DUBALDI: Make a motion we declare lead agency under the SEQRA process.

MR. STENT: Second it.

MR. PETRO: Motion has been made and seconded that the New Windsor Planning Board declare itself lead agency under the SEQRA process for the ECTS site plan on Route 300. Any further discussion?

MR. LUCAS: Just ask quickly that drainage you said you put the drainage in, right?

MR. SQUIRES: Yes.

MR. LUCAS: Have you had any problem since then?

MR. SQUIRES: Truthfully, we haven't had the runoff that we had in the middle of January to fully check it out.

MR. PETRO: We're just going to take lead agency but we're not going to do the SEQRA process until he has the complete plan in to Mark for review so the drainage will come more under the SEQRA process.

MR. SQUIRES: One more comment following that, from what I got from the DOT, the pipe that the DOT got is a 24 inch and we have 36 inch so that is my, on the basis of knowing that I have got capacity to handle both but that is what happened so there's no, there should be no bottleneck there.

MR. PETRO: Motion has been made and seconded before the board. Any further discussion? If not, roll call.

ROLL CALL

MR. LANDER	AYE
MR. LUCAS	AYE
MR. DUBALDI	AYE
MR. STENT	AYE
MR. PETRO	AYE

MR. PETRO: Now, I think that my opinion here and then I think we have some problems to do, I don't want to say the north side drainage problems and I think that we should maybe think of having a public hearing for this only because I know we're going to be having one next door being they have two applications coming in and they are one street apart I think it would be fair to have them both that is my opinion. It's a big enough project but I can tell you before we have a public hearing before we schedule one, I want to make sure that Mark has the drainage review in hand reviewed and we know what we're talking about. There's no sense in having a public hearing, not being able to answer any of the drainage problems.

MR. DUBALDI: Make a motion we schedule a public hearing.

MR. LANDER: Second it.

MR. PETRO: Motion has been made and seconded that we schedule a public helping for the ECTS site plan on Route 300. Is there any further discussion from the board members? I just want to state once again that we'll schedule it as long as you feel you can comply and have the drainage study or plan. Is it a study?

MR. EDSALL: It's a study and there will be some changes to this plan.

MR. PETRO: Okay so we'll schedule that once you find that if you contact Myra we're going to say that we're having a public hearing, we'll schedule it once you have the okay from Mark, that he has reviewed it and feels comfortable that we can go to a public hearing.

MR. EDSALL: Jimmy, assume you'd also want to have the lighting information also, that way you'll have a complete application. They've done a very good job in responding to all the other comments. If you have got these two things, you have all the information.

MR. DUBALDI: Do you have a copy of Mark's comments?

MR. SQUIRES: Yes, also Mark I'm thinking out loud here, whether we should go to another brief workshop session just to make sure that we have got it.

MR. EDSALL: Intention is that you can come to the workshop so you can straighten out any concerns before you come in so I would say yes.

MR. SQUIRES: Make sure you're satisfied.

MR. PETRO: We have a motion on the floor by Mr. Dubaldi to hold a public hearing, has been seconded, so is there any further discussion from the board members? If not, roll call.

ROLL CALL

MR. LANDER AYE
MR. LUCAS AYE
MR. DUBALDI AYE
MR. STENT AYE
MR. PETRO AYE

MR. PETRO: Myra, you'll be informed from Mark when he feels comfortable enough to schedule this.

MS. MASON: Okay.

MR. PETRO: Is there anything on this map as we see it now as far as conceptual or any other minor items that we need to go over?

MR. SQUIRES: This landscaping is about the same as it was many months ago, with the exception that on Wembly Road north end down here northwest corner we added landscaping there to shield the view this way. We're trying to do something to screen it out.

MR. PETRO: Mark, what about the growth you said you wanted to know what kind?

MR. EDSALL: Just as a matter of getting a schedule, I believe, you said the landscape architect had not had a chance to put the schedule on?

MR. LUCAS: He's got a plant list.

MR. EDSALL: There was some other information that I thought you said you wanted to add or was that it?

MR. SQUIRES: No, that was lighting we're talking about.

MR. EDSALL: I recall from the workshop there was some information but maybe you have gotten it all. I'm happy with the landscaping plan, I think they've done a good job.

MR. SQUIRES: You and I had talked about through your suggestion we added the additional landscaping here.

April 10, 1996

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MR. EDSALL: They added not only some plantings in the area, they suggested, they enhanced it even more.

MR. PETRO: I don't have any problem. Anybody else want to go further with the landscaping?

MR. LANDER: No.

MR. PETRO: I think we have gone as far as we can tonight, once you get the drainage study done and the lighting plan done and Mark reviews it we'll have it scheduled for a public hearing and looks like you're pretty much on your way, okay.

MR. SQUIRES: Thank you.

MR. STENT: On the landscaping, any idea of putting a flag pole outside of the building?

MR. SQUIRES: There's one right now right out in front of the office there.

MR. KRIEGER: Bearing in mind at all times a flag pole means there's supposed to be a flag.

MR. DUBALDI: American flag.

RESULTS OF P.E. MEETING

DATE: April 10, 1996

PROJECT NAME: ECTS Site Plan PROJECT NUMBER 95-12

LEAD AGENCY:

* NEGATIVE DEC:

M) D S) S VOTE: A 5 N 0

* M) S) VOTE: A N

CARRIED: YES ✓ NO

* CARRIED: YES: NO

PUBLIC HEARING: M) 0 S) LN VOTE: A 5 N 0

WAIVED: YES NO ✓

SEND TO OR. CO. PLANNING: M) S) VOTE: A N YES NO

SEND TO DEPT. OF TRANSPORT: M) S) VOTE: A N YES NO

DISAPP: REFER TO Z.B.A.: M) S) VOTE: A N YES NO

RETURN TO WORK SHOP: YES ✓ NO

APPROVAL:

M) S) VOTE: A N APPROVED:

M) S) VOTE: A N APPR. CONDITIONALLY:

NEED NEW PLANS: YES NO

DISCUSSION/APPROVAL CONDITIONS:

Shed on map should read "removed"

Mark's comments
Drainage review must be in before P.H. scheduled

Return to WS.

Must hear from Mark before scheduling P.H.

WILLIAM C. SQUIRES, P.E.
Consulting Engineer
11 Ashwood Terrace Newburgh, New York 12550
(914) 561-3299 Fax (914) 565-1353

RECEIVED

FEB - 2 1996

TOWN OF NEW WINDSOR
SUPERVISOR

Mr. George J. Meyers, Supervisor
555 Union Avenue
New Windsor, NY 12550

February 2, 1996

Re: ECTS Site
Temple Hill Road
New Windsor, NY

Dear Mr Meyers,

Contrary to comments transmitted to you action has been taking place on the installation of the 36" storm sewer pipe at the aboved referenced site. Worked started on January 26, 1996 from the west end of the site and is progressing eastward. As of yesterday morning (Feb 1) approximately 150 ft of pipe had been installed. Pipe installation may halt for a day while a trench box is brought in to provide safety in a deep trench area. During this time the contractor is grading the area around the installed pipe. Throughout this time the temporary pipe and trench installed to relieve upstream flooding remains active.

Sincerely,



William C. Squires, P.E.
W. C. Squires Consulting Engineers

WCS/js

cc: Mark Edsall
Planning Board Chairman James Petro
Town Building Inspector Michael Babcock
ECTS - John Wolf

RESULTS OF P.B. MEETING

DATE: July 26, 1995

PROJECT NAME: ECTS S.P. PROJECT NUMBER 95-12

LEAD AGENCY:

* NEGATIVE DEC:

M) S) VOTE: A N

* M) S) VOTE: A N

CARRIED: YES NO

* CARRIED: YES: NO

PUBLIC HEARING: M) S) VOTE: A N

WAIVED: YES NO

SEND TO OR. CO. PLANNING: M) S) VOTE: A N YES NO

SEND TO DEPT. OF TRANSPORT: M) S) VOTE: A N YES NO

DISAPP: REFER TO Z.B.A.: M) S) VOTE: A N YES NO

RETURN TO WORK SHOP: YES ☒ NO

APPROVAL:

M) S) VOTE: A N APPROVED:

M) S) VOTE: A N APPR. CONDITIONALLY:

NEED NEW PLANS: YES NO

DISCUSSION/APPROVAL CONDITIONS:

Add lighting

-----x
In the Matter of the Application of

ECTS SCENIC TECHNOLOGIES
A/K/A SCENIC PROPERTIES, INC.

DECISION GRANTING
AREA VARIANCES

#95-30.
-----x

WHEREAS, ECTS SCENIC TECHNOLOGIES, a corporation having an office at Shore Road, Cornwall-on-Hudson, New York 12520, has made application before the Zoning Board of Appeals for a 7.05 ft. front yard (Wembly Road west), 4.11 ft. front yard (Temple Hill Road), 2.53 ft. maximum building height and 135 parking space variance in order to utilize the existing structure for production of stage scenery at the location on Temple Hill Road (formerly Boss Glass) in a PI zone; and

WHEREAS, a public hearing was held on the 26th day of June, 1995, before the Zoning Board of Appeals at the Town Hall, New Windsor, New York; and

WHEREAS, the Applicant appeared by William Squires, P. E.; and

WHEREAS, there was one spectator appearing at the public hearing; and

WHEREAS, one person spoke raising questions with respect to the application and the operation to be conducted there if the application is granted; and

WHEREAS, the Zoning Board of Appeals of the Town of New Windsor makes the following findings in this matter:

1. The notice of public hearing was duly sent to residents and businesses as prescribed by law and published in The Sentinel, also as required by law.

2. The evidence presented by the applicant showed that:

(a) The subject property is a commercial premises located in an industrial development in a neighborhood of other commercial premises and across the street from other commercial premises.

(b) The variance requested for the mason rebuilding was made necessary by the expansion of the adjacent Route 300 by the State of New York. Before that expansion it was in compliance with the Town of New Windsor Zoning Local Law.

(c) With respect to the height variance, the height of the building as it exists is consistent with the neighborhood and is visually consistent with the neighborhood.

(d) The variance for offset distance is not apparent

for the existing structure because the property line in this area is considerably removed from the edge of the pavement so that it appears consistent with the neighborhood.

(e) With respect to the parking, there is provision on the site instituted in the requisite amount of parking and since any future commercial use of the premises will be subject to a site plan, it is anticipated that if greater parking is required for some future use, it could be supplied.

(f) The premises as it existed was in the same condition before it became the property of the present owner and all variances which are sought herein are for existing conditions.

(g) To put additional paved parking spaces on the premises, while possible, would have an adverse effect on the drainage from the premises.

(h) The variances sought could not be avoided except by demolition and reconstruction of the entire structure.

(i) The traffic on Route 300 would be approximately the same as was the case when the building was occupied by the previous tenant as the number of employees are approximately the same or less.

(j) The proposed operation would dispose of the small amount of hazardous waste that is produced, in an environmentally conscious manner.

(k) Waste material and refuse from products will be stored inside the building to the south and will not be exposed to the elements.

WHEREAS, the Zoning Board of Appeals of the Town of New Windsor makes the following conclusions of law in this matter:

1. The requested variances will not produce an undesirable change in the character of the neighborhood or create a detriment to nearby properties.

2. There is no other feasible method available to applicant which can produce the benefit sought other than the variance procedure.

3. The variances requested are substantial but are nevertheless warranted because of the unique layout and construction of the site.

4. The requested variances will not have an adverse effect or impact on the physical or environmental conditions in the neighborhood or zoning district.

5. The difficulties herein are not self-created as the building and site existed in its present condition when it was purchased. The variance requested for parking is self-created but should be granted because reduced parking will produce a

reduced impact of traffic on the adjacent Route 300 and will promote drainage of the premises by not having impervious surfaces throughout.

6. It is the finding of this Board that the benefit to the applicant, if the requested area variances are granted, outweighs the detriment to the health, safety and welfare of the neighborhood or community by such grant.

7. It is the further finding of this Board that the requested area variances are the minimum variance necessary and adequate to allow the applicant relief from the requirements of the bulk regulations and at the same time preserve and protect the character of the neighborhood and the health, safety and welfare of the community.

8. The interests of justice will be served by allowing the granting of the requested area variances.

NOW, THEREFORE, BE IT

RESOLVED, that the Zoning Board of Appeals of the Town of New Windsor GRANT a 7.05 ft. front yard (Wembly Road west), 4.11 ft. front yard (Temple Hill Road), 2.53 ft. maximum building height and 135 parking space variances in order to utilize existing structure for production of stage scenery at the Temple Hill Road location (formerly Boss Glass), in a P.I. zone, as sought by the applicant in accordance with plans filed with the Building Inspector and presented at the public hearing.

BE IT FURTHER,

RESOLVED, that the Secretary of the Zoning Board of Appeals of the Town of New Windsor transmit a copy of this decision to the Town Clerk, Town Planning Board and applicant.

Dated: August 14, 1995.


Chairman

(ZBA DISK#13-072195.ECT)



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.**

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
JAMES M. FARR, P.E.

- ☐ **Main Office**
45 Quassaick Ave. (Route 9W)
New Windsor, New York 12553
(914) 562-8640
- ☐ **Branch Office**
507 Broad Street
Milford, Pennsylvania 18337
(717) 296-2765

23 January 1996

William Squires, P.E.
11 Ashwood Terrace
Newburgh, New York 12550

SUBJECT: ECTS SITE PLAN
NEW WINDSOR PLANNING BOARD NO. 95-12

Dear Mr. Squires:

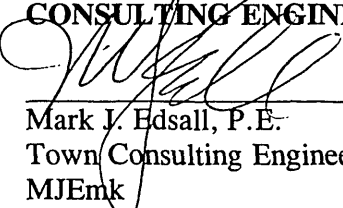
We have observed that the piping materials have been delivered to the subject site for the installation of the replacement drainage system at the west side of the property.

As the authorized representative of ECTS, you assured the Town that installation would proceed immediately following delivery of all necessary materials. Please verify that all materials necessary have been delivered, and if so, please coordinate the necessary survey stakeout, such that the work can be initiated.

We would anticipate that work would begin no later than 29 January 1996 on the installation. Please contact the undersigned immediately, if this is not the case.

Very truly yours,

**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS, P.C.**



Mark J. Edsall, P.E.
Town Consulting Engineer
MJEmk

cc: Supervisor George J. Meyers
Planning Board Chairman James Petro
Town Building Inspector Michael Babcock
A:SQUIRES2.mk



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.**

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.
JAMES M. FARR, P.E.

14 November 1995

W.C. Squires Consulting Engineers
11 Ashwood Terrace
Newburgh, New York 12550

ATTENTION: MR. SQUIRES

SUBJECT: ECTS SCENIC TECHNOLOGIES SITE PLAN
NEW WINDSOR PLANNING BOARD NO. 95-12

Dear Mr. Squires:

I have received your submittal of two (2) copies of the revised site plan for the subject project, with attached computer printout for stormwater evaluation at the site.

Review comments were prepared by the undersigned for the Planning Board meeting on 26 July 1995. It is my understanding that you were provided with a copy of these technical review comments. I have reviewed your latest site plan submitted and provide the following comments in numerical order as referenced on my aforementioned review comment sheet:

1. The bulk table should include the date on which the Zoning Board granted the variances indicated on the plan.
- 2.a. The bulk table has not been corrected and the table as presented on this latest plan continues to not comply with the format and requirements of the Town Zoning Code.
- 2.b. The latest plan submitted includes a tabular evaluation of three (3) different types of paving requirements for the site. We have not received a revised copy of Sheet C-2 for the plans, which had details of the work. This should be resubmitted.

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With regard to the information submitted on the latest C-1 sheet, please note that it is our opinion that the 1" top course over existing gravel and new crushed stone is an unacceptable pavement structure. We believe the 1" top course is inadequate with no base pavement course and we believe (as previously noted) that the crushed stone is an inappropriate selection for subbase material.

With regard to the new paved areas, the pavement courses appear to meet minimum requires, although no indication is made whatsoever as to the subbase for the pavement structure.

We believe the difficulties with the pavement indications on the plan would be solved with the various details being provided on Sheet C-2 and a pavement plan being prepared which would outline what pavement methods are required in what areas, on a plan view approach rather than a tabular indication where contractors could misunderstand what pavement construction occurs where.

- 2.c. The latest version of Sheet C-2 appears to include some indication of site grading via proposed contours. We are having great difficulty in completely understanding the proposed grading, since the existing contour symbols and proposed contour symbols are difficult to distinguish from other lines on the plan. Further, we are having difficulty in "closing" the contours across the site between proposed and existing conditions.

Once we receive a plan which is more clear and easier to follow, we can determine if unacceptable slope conditions or other problems continue to exist for the proposed site.

- 2.d. It is still difficult to determine where all the retaining walls exist on the site. A typical detail has now been added which indicates dimensional and reinforcement requirements for retaining walls up to 8' in height. It would be beneficial for the plan to establish a usable symbol for retaining walls, such that same can be easily located. This will also assist in the understanding of the grading referenced under Comment 2c.
- 2.e. The latest plan submitted indicates a total of four (4) handicapped parking spaces for the site. A total of 148 parking spaces are indicated as proposed. The indicated number of handicapped parking spaces does not comply with the minimum requirements of the New York State Uniform Building Code.

- 2.f. The latest version of Sheet C1 indicates some drainage improvements on the site. We have also received a computer printout of an analysis for the drainage.

First, a review of the plan indicates what would appear to be significantly undersized drainage piping, notwithstanding the computer analysis data submitted. The Applicant's Engineer should clearly understand that on-site stormwater must be properly contained and discharged to existing courses and, as well, existing drainage structures and facilities which are to be extended must be extended with proper capacity. Minimum stormwater incidents (10-year, 25-year, etc.) in compliance with Town standards must be used.

In line with our conversation on the morning of 13 November 1995, we will await a resubmittal of the proposed drainage improvements plan, as well as a revised drainage report which will include a narrative (stormwater management study) to discuss the design requirements for the systems.

- 2.g. As previously indicated, if a project sign is proposed, same should be shown on the plan and a detail provided.
- 2.h. As previously indicated, minimal spacing is provided between existing Buildings 1 and 2 with proposed Building 3. The Applicant was to provide technical information regarding the proposed building, such that verification could be made that the spacing shown complies with the State Building Code. As of this date, I am not aware of this information being provided to the Town Building Inspector.
- 2.i. It is my understanding that the Applicant is to submit a landscaping plan for the project. No such plan has been submitted, to my understanding.
- 2.j. As of this date, I have not received information with regard to site lighting for the project. This information was to be submitted, as per the 22 March 1995 Planning Board meeting.

Also with regard to the drainage improvements for the project, this letter will confirm my discussion with you on the morning of 13 November 1995, at which time I advised you that you must contact the New York State Department of Transportation representatives with regard to the extension of their drainage system and interconnection of your drainage piping. Apparently, based on your comments, no easements exist with regard to the culvert discharge from State Highway 300. You should resolve these issues directly with the NYSDOT.

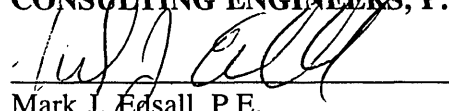
14 November 1995

One Hundred Ten (110) days have elapsed since the Planning Board meeting of 26 July 1995. Based on my review on this date, it appears that the great majority of the comments from that meeting have not yet been addressed, nor the requested plans submitted for Planning Board review. We trust you will discuss this with your client and give same your immediate attention. You are reminded that the required information should be prepared and you should schedule an appearance at the Technical Work Session, held during business hours on the Wednesday prior to all scheduled Planning Board meetings. You can arrange your attendance for this Work Session with the Planning Board Secretary, Myra Mason.

If you have any questions concerning the above, please do not hesitate to contact the undersigned.

Very truly yours,

**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS, P.C.**



Mark J. Edsall, P.E.
Planning Board Engineer

MJEmk

cc: Supervisor George J. Meyers
James Petro, Planning Board Chairman

A:SQUIRES.mk



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**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 26 JULY 1995
DESCRIPTION: THE APPLICATION INVOLVES A PROPOSED CHANGE IN
OCCUPANCY TO THE FORMER BOSS GLASS BUILDING, AS
WELL AS A PROPOSED NEW BUILDING AND VARIOUS
SITE IMPROVEMENTS. THE PLAN WAS PREVIOUSLY
REVIEWED AT THE 22 MARCH 1995 PLANNING BOARD
MEETING, AT WHICH TIME IT WAS REFERRED TO THE
ZONING BOARD OF APPEALS FOR NECESSARY
VARIANCES.

1. The property is located within the Planned Industrial (PI) Zoning District. The use classification referenced is Use By Right No. 15.

The application was referred to the Zoning Board of Appeals and, it is my understanding that the Applicant has received all the necessary variances. The variances are listed on the bulk table on the plan. A record of the ZBA action should be in the Planning Board files.

2. Technical Review Comments were provided to the Applicant at the 22 March 1995 Planning Board meeting. Several of the review comments have not been addressed on the most recently submitted plans. These comments include the following:
 - a. Some corrections to the zoning bulk table are required.

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS
PAGE 2**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 26 JULY 1995

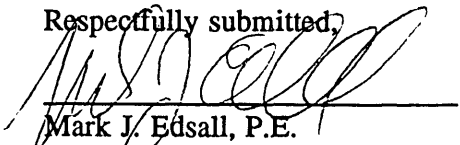
- b. Although a paving detail has been added to Sheet C-2 of the plans, I question whether all areas will receive 5" of paving. Further, the detail indicates a 6" Item 4 base. Is this required in all areas? Also with regard to the paving detail, I do not recommend the use of crushed stone; this reference should be deleted from the detail.
- c. Previously, I commented with regard to separation between parking areas, truck entry and loading areas, etc. This continues to be of concern, especially since the plan does not depict (to my understanding) proposed contours for all areas. Some parking areas appear to have unacceptable slope conditions, some exceeding 20%.
- d. A detail has been provided for the retaining wall on the south side of the proposed building, between Buildings 1 and 2. Is this the only retaining wall on site? If not, additional details or information is required.
- e. The site only includes two (2) handicapped parking spaces. This is an unacceptable amount based on the total number of parking spaces at the facility. Additional spaces are required based on the New York State Uniform Building Code.
- f. The plan does not include any information whatsoever with regard to stormwater collection and drainage for the site.
- g. A project sign, which would be anticipated, is not indicated. No detail is provided.
- h. Minimal spacing is provided between the proposed Building 3 and existing Buildings 1 and 2. The Applicant was to provide technical information on the "Rubb relocatable building" to the Building Inspector and Fire Inspector's offices, to verify that the spacing shown meets State Code. Prior to consideration of approval for this site plan, a report from the Building and Fire Inspector should be on file.

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS
PAGE 3**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 26 JULY 1995

- i. It is my understanding from the previous meeting that the Applicant would be required to submit information with regard to site landscaping. The plan does not include any information, whatsoever.
 - j. It is my understanding from the previous meeting that the Applicant would be required to provide some lighting information with regard to the parking areas and entries. No information whatsoever is provided on these plans.
3. The Board should determine if a Public Hearing will be required for this application. If so, the Board should determine whether all the information referenced above should be submitted for review of the Board prior to scheduling of the Public Hearing. It is my recommendation that the Board follow this procedure.
 4. At such time that the Planning Board has made further review of this application, further engineering reviews and comments will be made, as deemed necessary by the Board.

Respectfully submitted,


Mark J. Edsall, P.E.
Planning Board Engineer

MJEmk

A:ECTS2.mk



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

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4 March 1996

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MEMORANDUM

TO: George J. Meyers, Town Supervisor
James Petro, Planning Board Chairman

FROM: Mark J. Edsall, P.E., Town Consulting Engineer

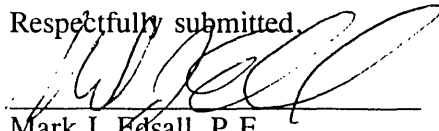
SUBJECT: ECTS SITE - DRAINAGE IMPROVEMENTS
FIELD REVIEW 1 MARCH 1996

By copy of this memorandum, I am advising you of the completion of the replacement storm drainage piping work through the subject property. On the afternoon of 1 March 1996, the undersigned and Michael Babcock, Town Building Inspector, visited the site to review the work. It appears that the work has been completed in an acceptable fashion, although it is possible that modifications to the catch basin rims (castings) may be required to suit final pavement work of the project.

As you are aware, ECTS has a pending application before the Town Planning Board. One issue which must be evaluated before a SEQRA determination can be made, or an approval granted, is the potential effect of connecting additional paved areas to the drainage system through the project. More specifically, I am concerned about the potential effect on the Mt. Ellis property. It should be noted that I have received calls from Mt. Ellis representatives noting their concern. They are aware that there is the outstanding issue of the drainage improvements for the Gateway Industrial Park subdivision, as discussed with Bill Helmer both in the past and in connection with the also pending Isulpane site plan application.

If you have any questions regarding the above, please do not hesitate to contact me at your convenience.

Respectfully submitted,


Mark J. Edsall, P.E.
Town Consulting Engineer
MJEmk
A:3-4-2E.mk

REGULAR ITEMS:

ECTS SITE PLAN (95-12) RT. 300

Mr. William Squires appeared before the board for this proposal.

MR. PETRO: You have been to the Zoning Board?

MR. SQUIRES: Yes and the Zoning Board has approved the variances that we requested.

MR. PETRO: Can you go over those just briefly and are they located on the map?

MR. SQUIRES: Basically, the variances that we requested are for a height and distance variance for this addition off of Wembly Road Extension. It was deficient on the sides here, by seven feet in width and by height 2 1/2 foot variance and it's an existing building as we discussed some time before. The other variance that was requested was one for this front building facing Temple Hill Road where it was also distance variance, it was created by State of New York when they widened and repaved Route 300 some years ago and causing that to become deficient. The last variance was for parking, there was by calculation a requirement of 282 and they approved the proposed usage 148 in granting us a variance of a 134 spaces.

MR. PETRO: The three variances granted, are they on the map here? I see you have a note added approved zoning variances.

MR. SQUIRES: I listed them, maybe I'm not in proper form for you.

MR. PETRO: You need to have them listed or stated somewhere on the map, is that correct?

MR. BABCOCK: What he did, Mr. Chairman, is in the bulk table, he put required, allowed, existing, proposed and then variances granted. It's not the normal. If you--

MR. PETRO: As long as it's stated somewhere on the

map, I think that is sufficient. I didn't see that there, I just saw note number one down here.

MR. PETRO: Have you seen a listing of Mark's comments at all?

MR. SQUIRES: Most recent ones no, I have not.

MR. BABCOCK: I have it here for him, Jim.

MR. SQUIRES: In addition, I also brought along a landscape plan we talked about that before. You don't have a copy of it, just lately been prepared. If you want to discuss this right now we can also.

MR. LANDER: Might as well, Mr. Chairman.

MR. PETRO: Sure.

MR. SQUIRES: I have Kristen Williams, she prepared this. Why don't you explain what you have done?

MS. WILLIAMS: Since the building is so long, there's no way that you could possibly completely screen it but I have chosen a planting design that will soften the exterior of the building. The two main areas that I focused on for softening are the end points where there will be trucks loading in and out I have used a mix of deciduous and evergreen trees for the rest and the deciduous will grow lower to the ground and provide more screening at a lower level and the deciduous will grow quicker and provide some canopy quicker, more readily. As far as the front of the building is concerned, I softened the exterior by using a mix of plants that will provide seasonal interest, including capital pears, rhododendron and existing junipers, which are located here expanding upon that and that is pretty much it.

MR. PETRO: Are any of these plantings there existing at this time or all new?

MS. WILLIAMS: The majority of it is proposed, along Route 300 here on the state property are existing trees and there are the two white pines and a birch and two

existing sycamores which I retained because they'll give screening.

MR. PETRO: The trees on the easement are existing already?

MS. WILLIAMS: Yes, they are.

MR. PETRO: Any other comments?

MR. LANDER: I had met with Miss Williams a few weeks back and I told her because of the phasing of this project to concentrate on the front and the two sides of the building and not be concerned with Phase 2 right now.

MR. PETRO: Phase 2 being the large building.

MR. LANDER: There's two phases to this project, the front building then the back building.

MR. SQUIRES: No, not really. The plans for usage right now is to get this back building occupied for warehousing purposes while this is being prepared so it is going to be more of a comprehensive.

MR. LANDER: One phase then?

MR. SQUIRES: Yes.

MR. DUBALDI: There's nothing on the plan that states it's multi phase.

MR. LANDER: I thought I had heard that at the last meeting.

MR. PETRO: Wembly Road, which is I guess to the west, you have nothing coming down, is that it?

MR. SQUIRES: They are both road extensions.

MR. PETRO: Anyway on the west side, I see nothing there at all.

MS. WILLIAMS: This is all going to be asphalt.

MR. SQUIRES: As a paved area, I hate to flip this back and forth on you, but it may be a little easier to understand this is the extension area and you have got loading docks here, the landscaping that Kristen showed is right along this area here and this is paved for truck parking and there's loading docks here and you have the building so there really, it will be very difficult to introduce plantings in here and still be able to maneuver the trucks. What we were trying to do is screen that truck area from Route 300.

MR. PETRO: What about the rear of the property?

MR. SQUIRES: Back here?

MR. PETRO: Yes.

MR. SQUIRES: Right now, we have nothing but existing grass that is in there, we have that.

MR. PETRO: What's directly behind it there? There's nothing developed there?

MR. BABCOCK: There's a vacant lot and Mt. Ellis Paper.

MR. PETRO: That is a large lot, though.

MR. SQUIRES: There's a large lot but through this area just below our property line is essentially a drainage area that runs southward and then finally into the Silver Creek back there, the one that is back towards the Thruway.

MR. PETRO: Silver Stream.

MR. SQUIRES: So really throughout where this drainage pattern is, there are a lot of trees and lot of shrubs already in existence.

MR. PETRO: Any other questions for Miss Williams?

MR. STENT: No.

MR. PETRO: Thank you. Let's go to number one. The

plan does not include any information whatsoever with regard to storm water collection and drainage for the site. Can you expand on that?

MR. SQUIRES: We have drainage collection on the down side here running across to the front side, the front side drains towards the gully that is along here, perhaps needs to be--

MR. PETRO: There's a sheet flow in the front to the outside.

MR. SQUIRES: Towards the outside is towards the drainage ditch that exists as part of the highway and then, and the rest of the sheet flow is directed towards these catch basins and then out towards the drainage channel.

MR. PETRO: Mike, do you know of any water problems on the site. I don't believe there are any. It seems to go to the back side.

MR. BABCOCK: Not on this particular site. I think on the site that is south of this, we have been working with Mt. Ellis, Mt. Ellis has always had the problem so there's drainage there. I see the catch basins which Mark was reviewing the catch basins that go along the building and then they turn to the south, kind of dead ends there. Bill, they just, it just stops on your property.

MR. SQUIRES: Yeah, I don't have a retention pond there, essentially collecting and allowing to flow to that gully stream that is behind.

MR. BABCOCK: The stream that--

MR. SQUIRES: That is what happens right now.

MR. BABCOCK: The stream is on your property or on somebody else's?

MR. SQUIRES: It's on the vacant lot but I understand there's been some effort being made by Helmer-Cronin I guess, I don't know if it was in conjunction with the

town or through Greg Shaw to handle a drainage pattern for that whole industrial site that included that gully behind us.

MR. LANDER: Mr. Chairman, maybe I can shed some light on this. If you drove down Wembly Road, there's a section of the road that hasn't been done yet, well, that is the drainage easement, all right. And that runs all the way between these, Mt. Ellis and that vacant lot, I think Helmer still owns that.

MR. BABCOCK: That is correct.

MR. LANDER: There's a drainage easement down through there, they are still in litigation, that is why between Helmer and Mt. Ellis, I believe this is why that has never been paved.

MR. BABCOCK: I think the applicant should, Mark is saying that he doesn't believe that there's adequate drainage on the site. Mark is familiar, he's been involved with that Mt. Ellis since day one, I think you really should get in touch with Mark.

MR. PETRO: We're going to do that, excuse me for interrupting, we are, we're going to do that on quite a few of these items we're going to give an overlay tonight because we need to have the engineer go over it. He has maybe 10 or 12 items here which is pretty extensive and I think you're going to need to sit down with him and go over some of these and get them straightened out.

MR. BABCOCK: It appears Bill that reading these, these comments have been outstanding for a while according to Mark I think what you need do is get an answer to some of these comments and get back to the workshop and the drainage can be taken up with Mark, he's familiar with that drainage problem there.

MR. PETRO: Some items also Bill are simple items like project sign which would be anticipated is not indicated, we need to have a detail of that, just a matter of doing it. The building that you are going to put in the rear we need to have some information passed

to the building inspector's office and fire inspector's office, I think we had discussed that and went over some of the landscaping tonight.

MR. SQUIRES: Don't you have that? I thought you had that building.

MR. BABCOCK: Yeah, I do, I have no objection to the building. What he is saying is the distance between the building, New York State code says there has to be a certain distance separation depending on the construction, I couldn't even tell you what that is right now, based on those three buildings Mark's just saying that the building appears to be close.

MR. PETRO: But we do, Mike, we have fire approval on 3/16/95 and we have highway approval on 4/18/95.

MR. BABCOCK: So that basically answers that one. The other large one that I see Mark has is lighting, parking lot lighting.

MR. PETRO: Is there anything on the plan or do you have any lighting detail drawn up?

MR. SQUIRES: That is a very good point, lighting is not defined.

MR. PETRO: Hasn't been addressed?

MR. SQUIRES: Has not been addressed.

MR. PETRO: Board should determine if a public hearing will be required. If so, the board should determine whether all the information referenced above should be submitted for review of the board prior to scheduling of public hearing. It's my recommendation that the board follow this procedure. I tend to agree, I think we need to have another meeting only because there's so many outstanding items and review it and schedule a public hearing if we deem it necessary to have a public hearing at that time. Do any of the other members have any input on a public hearing at this time?

MR. BABCOCK: Mr. Chairman, I might be able to answer

that. They had a public hearing for the zoning variance and as I remember there was one person there. It was from A & J Washroom Accessories and had some comments. The comments should be in the file there but that was, there was one person there. Bill, do you remember?

MR. SQUIRES: Very specific, the comments were a concern over the potential for additional traffic and it was a really more broad-based comment regarding the development of that whole industrial site and their concern for access out onto 300 because even right now, they have a very difficult time getting out of their own driveway when all UPS trucks are there and so forth but that was the legitimate concern.

MR. PETRO: We'll reserve judgment for that until the time comes we're going to review further comments and at that time, we'll probably ask you again how many people were at the zoning board public hearing and with that type of turnout, it's usually our procedure to maybe not have one, being there was so little interest and it is located in the proper zone. At this time, do any of the members have any comments or should we go with the--

MR. STENT: I'd like to, just like to have him go back with the engineer.

MR. PETRO: You can clear a lot of this up at the workshop with Mark. By the time you come to the next meeting, we should have it pretty well under control. Thank you.

MR. LANDER: Would you like anymore landscaping on this?

MR. PETRO: I your point is well taken, she has the front and the sides there. The side that I talked about is all blacktop and concrete and the rear of the property is not conducive to landscaping, so I think your plan was adequate. Good job.

MR. SQUIRES: Again now and the next meeting, if any of you drive by and say maybe we ought to put something

July 26, 1995

11

here, let us know.

MR. DUBALDI: Flag pole, can you give us one in the front?

MR. SQUIRES: There is one.

MR. PETRO: It's an improvement of what's there already so I think we're in good shape.

MR. SQUIRES: Very good, thank you.

CALL MARK

SET

GEORGE WANT SOMETHING BACK

BY DEC-15-1995

ECTS SCENIC TECHNOLOGIES

MR. NUGENT: Request for 7.05 ft. front yard (Wembly Road west), 4.11 ft. front yard (Temple Hill Road), 2.53 ft. maximum building height and 135 parking space variances in order to utilize structure for production of stage scenery at location on Temple Hill Road (former Boss Glass) in a PI zone.

Mr. William Squires, P.E. appeared before the board for this hearing.

MS. BARHNART: For the record, I sent out 37 addressed envelopes to adjacent property owners on June 13, 1995 in a timely manner.

MR. SQUIRES: Last time we met, we talked about these variances that we're requesting and after I left, i went out and took some photographs and had them blown up of the site. Now, the first variance that we're requesting is a distance variance off of Temple Hill Road to the masonry building, that is on the south east corner of the lot, which is this building right here shown in this picture and here looking north down the drive. When this was originally constructed, it was in compliance with the zoning laws but when they widened Route 300, four or five years ago, the state came in and by eminent domain acquired additional property and at that time forced the building into a noncompliance situation. And that is one. The second variance which is a distance and a height variance for an addition that was put on this north end, a 50 by 75 foot addition with a 24 foot eaves, that is represented here, this is a photo looking from Route 300 westward down Wembly Avenue extension and this is the building here that has the need for a variance. That building is also shown here on this photo looking from Wembly Avenue extension eastward up towards 300 with the building being back here. One of the things I'd like to point out to you regarding this is from a height standpoint, the most visible view from most people is seeing it as you're traveling along Route 300 and Route 300 is substantially higher than the area as you get into the industrial part so the height is not as pronounced as you would think. And secondly, the

offset distance here is also not as obvious as you would think because the property line here is quite a bit of distance about 15, 20 feet to the edge of the pavement of the road, which is a fairly large amount compared to a lot of areas where the property line is closer to the road and that in my opinion adds a little bit to the distance consideration. That is those distance variances. The other variance that we're requesting here is to limit the amount of parking that we're providing to 134 vehicles, rather than, I'm sorry, to 148 vehicles rather than the 282 that the zoning would require. The two reasons we're limiting ourselves or, trying to limit ourselves to 148 is one the maximum employment that has ever been for the facility of East Coast 125 and we're going beyond that and secondly, I'm trying to balance somewhat the effects of having too much paving in there against the runoff, I'd like to be able to utilize as much of the natural land as possible for soil absorption rather than putting more into a drainage consideration. The drainage that we do have the variances that we're requesting are basically ones that are of our own making because we're acquiring the piece of property that we knew in advance had violations and had no prior permit or C of O. Other than that, though, that explains the variances we're requesting and any questions?

MR. KANE: Mike, the building height, does that come into effect because of the change of Temple Hill, would that be closer to the road?

MR. BABCOCK: The building height?

MR. SQUIRES: Height and distance variance required are for the addition off of Wembly Avenue extension as opposed to the one of--

MR. BABCOCK: Mike, in a PI zone, it's six inches per foot, the distance of the nearest lot line. So as you put an addition on the building and get closer, your building height goes down.

MR. TORLEY: At the Preliminary Hearing, you felt that putting in more parking spaces to get closer to the

requirements might leave you a drainage problem and cause difficulties for other nearby owners.

MR. SQUIRES: That is true. I'm trying to draw a balance between satisfying parking requirement and not creating another problem by doing that.

MR. KANE: And also with most of these variances, you're really not self-created but created by a prior, by the prior builder and you inherited that by purchasing the building.

MR. SQUIRES: Right, knowingly so.

MR. LANGANKE: Didn't we also determine that if this property were sold in the future for a different use and the parking requirements change that they would have to come back and get re-evaluated?

MR. BABCOCK: That is correct.

MR. SQUIRES: So the parking is tied to the current use.

MR. KANE: Right.

MR. BABCOCK: Right, if somebody else operates the building under the same use, they would have the same requirements.

MR. KANE: And financially, it's not possible to change the building height at this time or move it so there's a financial hardship.

MR. NUGENT: They bought it because of the height of it.

MR. KRIEGER: But the question is it wouldn't be easy to change the height of the building at this point?

MR. BABCOCK: No.

MR. KANE: We need you to answer the question.

MR. BABCOCK: Structurally, you couldn't change the

height of the building.

MR. SQUIRES: It would require demolition.

MR. KRIEGER: What is it, if I may, what are the properties that surround this building?

MR. SQUIRES: Well, across the road, Wembly Avenue, it is an empty lot at this time, it's part of the planned industrial zone. Behind this or to the west, I guess is further down is Grangers.

MR. BABCOCK: Mt. Ellis Paper Supply, there's an empty lot between them and Mt. Ellis Paper supply.

MR. KANE: So similar area, all similar businesses with big size buildings.

MR. LANGANKE: It's industrial.

MR. SQUIRES: On the east side is, well, from about midpoint here.

MR. BABCOCK: Some single families.

MR. SQUIRES: Union Avenue takes off coming up to here and beyond that, there's some store front situations right on the corner and beyond that it becomes residential.

MR. KRIEGER: Is this building significantly higher than those particularly commercial and industrial uses that are in its immediate vicinity?

MR. SQUIRES: No, it is not higher than any of the others and like I mentioned before, I think it's even perceived to be fairly low because of the, it's relationship to Route 300, which is the main traffic area, which is about eight to ten foot from the ground level of the building to the road level of Route 300.

MR. NUGENT: Mr. Squires, we had some concerned citizens call us and wanted some questions answered. One of them was is it going to make a significant impact on the traffic in the area cause I know that is

a pretty congested area already.

MR. SQUIRES: I think to some extent there will be periods where it will be heavier than it is now because you do have a shift coming in, your employees coming in to an area but you do have two exits to get out. I appreciate their concern because I have gone through there plenty of times and I have watched for example the UPS trucks trying to get out and head north and I think it's difficult but that would be the main traffic concern would be those times, start and the end of the workday.

MR. BABCOCK: Maybe you can answer as far as Boss Glass you represented Boss Glass also and it was the same requirement.

MR. SQUIRES: That is a good point, Mike.

MR. BABCOCK: It was the same requirement for parking as for employees as the previous use as it is now. So I don't think, unless they are increasing the employee such an amount over and above what Boss Glass was or Insulpane, I think everybody knows Insulpane was there.

MR. SQUIRES: Actually, it's a lesser requirement, Boss Glass had over 200 employees when they are in full production.

MR. BABCOCK: So the traffic would decrease from what the present use was.

MR. LANGANKE: We're not saying that this is almost maximized because isn't there a lot of space for more development in that park?

MR. NUGENT: Yes.

MR. LANGANKE: We couldn't be possibly be at capacity now.

MR. BABCOCK: Right.

MR. KRIEGER: What impact on the traffic would there be with respect to non-employee traffic deliveries and

whatever the opposite of delivery is?

MR. SQUIRES: On an overall monthly period, it would be very small. There's a point where loading all the scenery, it is going out over a period of a day or two, they may have five or six total semis come in, load it up and then gone. But it's not like you're like Howard Express, it would be periodically and come in little bunches but the bunches then are even small.

MR. NUGENT: I have one other question from a concerned citizen about the paints and turpentine disposal that they use in the manufacturing of these sets, what do they do with it when it's finished?

MR. SQUIRES: This is Orestes Mihaly from East Coast.

MR. MIHALY: Most of the paint products that are used in the construction of our scenery is all latex paints, we use very small amounts of oil base or like a car paint type of thing. Those items that we do use we have picked up, we keep the turpentine in buckets, we keep some of the things that we clean our electronic parts on which is 15 gallons over three months, it's really not a lot of stuff, picked up by a company that does handles hazardous wastes and it's all documented so we have our steel sent to be recycled and we try and be as environmentally conscious as possible, saves us money.

MR. SQUIRES: Add one more comment to that is waste material and refuse from products to be stored inside the building, that is to the south, the projects to the south, so that this will not be exposed and sitting outside with the overhead doors so that the cars come in and load it up, nothing unlike what was going on with Boss Glass where they had broken glass in cartons outside, this is all being kept inside.

MR. NUGENT: Are there any further questions by the board? I'll open it up to the audience. State your name for the stenographer, please.

MR. GRANUZZO: Representing Gamma Realtry and A.J. Washroom Accessories. On the opposite end of the

Wembly Road, can I go up there? I believe he was mentioning Wembly Road on the left side.

MR. SQUIRES: Wembly Road Extension.

MR. GRANUZZO: Is right here, my property runs right here, I don't have any objections with building height or anything else. In fact, I don't have any objections at all. I may be in the wrong court, maybe I have to direct this to the department of traffic, but what we have now are two problems. Number one, this building that was never completed is an eyesore and projects out quite a bit. To me, that is, I don't know if they intend to finish it or if it's too close to the road or what. Our main reason for being here is the 7 foot variance on Wembly Road, Wembly Road at this point is a very congested road. If you go there from 4 o'clock to 6:30, you can't leave the road, you can't make a left turn. It's not wide enough for people to make a right turn so we're trapped.

MR. SQUIRES: The variance isn't for Wembly Road, it's for Wembly Road Extension on this.

MR. GRANUZZO: That is why I say I may be here at the wrong area. What I am requesting is a widening of this road and a traffic light, some type of traffic control for that period of time from 4 o'clock to 6:30, those are my only objections. I welcome having a neighbor and you know that's about it.

MR. NUGENT: To answer your question, as far as this board is concerned, we really don't have a great deal of control over the widening of the road or traffic signal, that would be, would have to be I think brought before the Town Board.

MR. KRIEGER: Traffic concerns will have to be brought before the DOT and widening of the road, the appearance of the road.

MR. LANGANKE: Obviously, they are going to have to do something.

MR. GRANUZZO: Like I said, I didn't know if I was in

the right area or not. My objection is just the 7 foot variance. If you give him a 7 foot variance, are they then going to say that we can't widen the road because of that variance?

MR. TORLEY: It's on the other side.

MR. GRANUZZO: Okay, but you're saying Wembly Road.

MR. SQUIRES: One is Wembly Road, one is Wembly Road Extension, we're talking about the extension.

MR. TORLEY: Where you said they are going to be storing the waste products, is it presently not completed?

MR. SQUIRES: Right now, it does not have a skin on it but it's going to be skinned and it is 54 feet away from the property line.

MR. TORLEY: It will be skinned in completely?

MR. SQUIRES: Oh, yes, yes.

MR. BABCOCK: The building that they are talking about he's not requesting a variance for.

MR. TORLEY: I know.

MR. KANE: So you know that if this one variance is going for on Temple Hill, they are basically going for that variance because the state did take the property so they wanted to, my point is if they want to widen the road, they'll do it, whether there is a variance there or not, they'll just do it.

MR. GRANUZZO: That was my only objection.

MR. SQUIRES: I just, I tend to agree with you, that it requires some traffic control. I want to make a point for you is we're holding the parking back considerably so we're not trying to provide parking right up to this property line so there's room for the state to acquire some of the land for road expansion.

MR. GRANUZZO: That is definitely needed.

MR. KRIEGER: With respect to the park, I would encourage you to make your comments known both to the DOT and to the Planning Board, New Windsor Planning Board cause this particular application and all their applications for the building within that industrial park will have to get approval, site plan approval from the Planning Board. That is not this board but that is the--

MR. GRANUZZO: I'll follow it through that way. I just wanted to know where we stood there.

MR. NUGENT: Is there anyone else in the audience that would like to speak? Hearing none, we'll close the public hearing and open it back up to the board members for any further questions.

MR. TORLEY: I'm glad to see a new tenant coming in there, going to be a real asset.

MR. NUGENT: I'll accept a motion.

MR. TORLEY: I move we grant ECTS there requested variances.

MR. KANE: Second the motion.

ROLL CALL

MR. KANE	AYE
MR. LANGANKE	AYE
MR. TORLEY	AYE
MR. NUGENT	AYE
MR. REIS	AYE

MR. KANE: I move we adjourn.

MR. REIS: Second it.

ROLL CALL

MR. KANE	AYE
MR. LANGANKE	AYE

June 26, 1995

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MR. TORLEY
MR. NUGENT
MR. REIS

AYE
AYE
AYE

Respectfully Submitted By:



Frances Roth
Stenographer

6/28/98

RESULTS OF P.B. MEETING

DATE: March 22, 1995

PROJECT NAME: ECTS S.P. PROJECT NUMBER 95-12

* * * * *

LEAD AGENCY:

* NEGATIVE DEC:

M) S) VOTE: A N

* M) S) VOTE: A N

CARRIED: YES NO

* CARRIED: YES: NO

* * * * *

PUBLIC HEARING: M) S) VOTE: A N

WAIVED: YES NO

SEND TO OR. CO. PLANNING: M) S) VOTE: A N YES NO

SEND TO DEPT. OF TRANSPORT: M) S) VOTE: A N YES NO

DISAPP: REFER TO Z.B.A.: M) S) D VOTE: A N YES NO ✓

RETURN TO WORK SHOP: YES ✓ NO

APPROVAL:

M) S) VOTE: A N APPROVED:

M) S) VOTE: A N APPR. CONDITIONALLY:

NEED NEW PLANS: YES NO

DISCUSSION/APPROVAL CONDITIONS:

Send revised plan to ZBA

Need landscape plan

Gas tanks removed ? Need note on plan



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CONSULTING ENGINEERS P.C.

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WILLIAM J. HAUSER, P.E.
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**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 22 MARCH 1995
DESCRIPTION: THE APPLICATION INVOLVES A PROPOSED CHANGE IN
OCCUPANCY TO THE FORMER BOSS GLASS BUILDING, AS
WELL AS A PROPOSED NEW BUILDING AND VARIOUS
SITE IMPROVEMENTS. THE PLAN WAS REVIEWED ON A
CONCEPT BASIS ONLY.

1. The property is located within the Planned Industrial (PI) Zoning District. The Applicant proposes classification as Use By Right No. 15. The Board should verify that this selection is accurate.

The Applicant should verify, with the Building Inspector, which additions to Building No. 1 have a valid approval. Additions 1A and 1B have existing front yard setback non-compliances. It must be determined which or both require a setback variance. As well, Building 1 (as an entirety, including all additions) would also appear to require a building height variance.

In addition to the variances noted above, it appears that the application will require a variance for the number of provided off-street parking spaces.

2. A brief review of the site plan as submitted, raises the following comments:
 - a. The engineer should make sure that all dimensions indicated on the plan match the values indicated in the bulk table.
 - b. The proposed building (No. 3) scales 110 foot width, not 100 foot as indicated. Based on the floor area indicated in the bulk table, the 100 foot dimension is correct (therefore the plan view should be corrected).

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS
PAGE 2**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 22 MARCH 1995

- c. The plan should include the location map referenced on the plan, but not provided.
- d. The plan should clearly distinguish between existing improvements and proposed improvements. In areas where paved parking already exists, it should be verified that an overlay will be provided. In areas where no pavement exists, but a subbase exists, this should be indicated. Appropriate details should be provided.
- e. No separation appears to exist between the eight (8) parking spaces on the south end of the building and the apparent truck entry or loading area to the front of the parking spaces. This should be resolved.
- f. For the parking spaces on the southwest side of the building, it is recommended that curbing or wheel stops be provided.
- g. It would appear that a retaining wall is proposed for several areas of the site. No details are included on the plans for same. These should be included.
- h. The site includes a total of 131 parking spaces, with only two (2) handicapped spaces being provided. Based on the New York State Uniform Building Code, a total of five (5) handicapped spaces are required, not two (2).
- i. The handicapped parking spaces, as depicted on the front (east) side of the building are the wrong configuration and do not comply with the current State Code requirements.
- j. The plan does not include any information whatsoever with regard to stormwater collection and drainage for the site.
- k. A project sign, which would be anticipated, is not indicated.

**TOWN OF NEW WINDSOR
PLANNING BOARD
REVIEW COMMENTS
PAGE 3**

REVIEW NAME: ECTS SITE PLAN
PROJECT LOCATION: TEMPLE HILL ROAD AND WEMBLY ROAD
SECTION 4-BLOCK 3-LOT 10.12
PROJECT NUMBER: 95-12
DATE: 22 MARCH 1995

1. No access appears to be provided to Building No. 2, other than possibly access directly from Buildings 1 and 3. Is access to Building 2 provided for truck traffic? Is a driveway proposed from either end to Wembly Road? Any such accesses should be indicated on the plan.
- m. Minimal spacing is provided between the proposed Building 3 and existing Buildings 1 and 2. The Applicant was to provide technical information on the "Rubb relocatable building" to the Building Inspector and Fire Inspector's offices, to verify that the spacing shown meets State Code. As of this time, I have not heard a determination in this regard.
3. Inasmuch as it is my understanding that the application will require a referral to the Zoning Board of Appeals, it is my recommendation that the Board review the comments noted above, toward a determination relative to the variances needed. Other non-variance issues can be resolved upon the Applicant's return to the Planning Board after ZBA action.
4. The Board should also discuss what additional information (if any) is required for this site plan. Does the Board desire the submission of a lighting plan and a landscaping plan?
5. At such time that the Planning Board has made further review of this application, **further engineering reviews** and comments will be made, as deemed necessary by the Board.

Respectfully submitted,



Mark J. Edsall, P.E.
Planning Board Engineer

MJEmk

A:ECTS.mk

ECTS - SCENIC TECHNOLOGIES SITE PLAN (95-12) RT. 300

Mr. William Squires appeared before the board for this proposal.

MR. SQUIRES: ECTS, as you all probably know, acquired the old Boss Glass Insulpane building a few weeks ago and in obtaining that and also it also obtained a building that has no previous site plan approval and also has a number of circumstances within the structures that are in violation of zoning code. So we're here tonight to discuss that and also what the plans are for the water structure and some other variances that I think we're introducing ourselves or need for a variance that we're introducing. Let me start out saying that we have two main violations of the zoning code with the existing building, one is the one story masonry building facing Temple Hill Road is closer to the road than the allowed offset. That situation was created by the change in property lines when Temple Hill Road was improved five, six years ago. So that is one situation where a variance is needed. The other is a dual one and that is what's labeled as building 1C, which is the addition that was put on, I'm sorry, 1B, which is the addition that was put on next to Wembly Road extension to the north, that is also too close to the road and it also has a, because it's too close to the road, it exceeds the height requirements listed based on six inches per foot away from the lot line. Those are the built-in problems that we have. In addition, ECTS is proposing to put in a portable or not portable but a movable structure which is this building. They currently have it erected in an operation on their current site in Cornwall. The desire is to put it between the main building that is facing Temple Hill Road and the secondary building that is towards the other structures, the air production company and so forth. In addition, I have gone through and done parking calculations, two ways you can normally do it. One based on the occupancy, upon the actual occupancy and second, according to the, at least my interpretation of the bulk tables. In this case, it's difficult to interpret cost use of the building in very black and white terms regarding this much is warehouse and this much is manufacturing, it's a more

complicated issue because of the product that they produce. In a minute, I'm going to have folks from ECTS give you an example of some of the sets that they have and explain why they need so much area and how it affects them. Throughout their, well, at this point in their existence, they had a maximum employment of 125 people. I also calculated the parking based on one parking for two people on a potential of 140 people being employed, what we're going to propose is 131 spots be provided. A breakdown by a sum of so much for warehouse, so much for manufacturing calculates out to having a requirement of 285 spots and so we're facing this variance situation. We intend to pave wherever we're going to park, wherever we plan to park, provide parking just behind the building, alongside of Wembly Road, the front area and then down on Wembly Road extension where we have basically truck entrances.

MR. PETRO: Mr. Squires, you're here tonight basically for referral to the Zoning Board?

MR. SQUIRES: Yes, exactly.

MR. PETRO: Mark, I want to ask you a question at this time. Normally, he has about 16 items here, a lot of which are housekeeping and technical and whatever that normally the board looks to get some of those cleaned up before we go through any further review. You have so many of Mark's comments here that you can, even the location map is missing, so we'd like to kind of get all these little things, we're not going to sit here and go over every one of these little items but my question is should we let that interfere tonight for referral to the Zoning Board, in other words, do they need to see most of these items cleaned up before we can refer them to the Zoning Board?

MR. LANDER: Can't send the map.

MR. EDSALL: I don't know that all of these items would need to be corrected before you send them to the ZBA because the ZBA is only going to consider the bulk noncompliances. They are not going to consider some of the site-related issues that you would look at. Some of these in fact do involve spacing between buildings,

some involve parking. If you have concerns on those, it would make sense to resolve those before they go to the ZBA, since one of the variances involves parking. But as far as location plan and the details for handicapped parking spaces, those things are well beyond the purview of the ZBA. So, it's a yes and no answer. Yes, there is certain items you should look at and if they are of concern, get those resolved before they go to the ZBA because it could result in them going to the ZBA and not getting the correct variance which would be unfair to them in the fact that they'd come back and have to go to the ZBA again. So you may want to discuss the plan for general layout, if you'd like to, while you're looking at it, I'll pick out the items I think you should concentrate on and if you feel comfortable at that point, they could go to the ZBA.

MR. SQUIRES: Certain areas that you and I discussed in our workshop session, Mark, have been, were modified before I submitted the plans, including the need for more area and redefinition of the area for landscaping.

MR. BABCOCK: The other side of that, Mr. Chairman, is that we have to do a referral sheet which takes a couple weeks to get that referral sheet done and get the minutes done and whatever and by that time, we can make sure that these things are done. They can come back to a workshop and do that.

MR. PETRO: I'm sure the board doesn't want to hold you up and not give you a referral but there are so many items I didn't want to send a real incomplete plan. We do have fire approval on 3/16/95.

MR. LANDER: Well, you were right in what you were thinking, Mr. Chairman, but if we could get these things cleared up and Mr. Edsall can check that on the approved note on the approved, on the improved plan, then we probably could send that on to Zoning.

MR. EDSALL: The only item that seems to affect the variance would be the bulk table information and my comment 2A is just making sure that I thought I misunderstood some numbers on the plan versus the bulk table, that is something that we can resolve before

it's referred. The rest of them are really layout questions and I think if you just generally look at the plan and you believe it's a reasonable approach that you see no problem referring to the ZBA, you can send them tonight.

MR. LANDER: One question, masonry building in the front 1A, you said that needed a variance because of the road widening?

MR. SQUIRES: Well, technically, you need 50 foot offset and apparently we're at 46.9 feet, I think it is, yes.

MR. LANDER: The state actually in their land taking gave you that, it's a variance, you didn't put the building up and then or create the variance or the need for a variance but by putting the building up, the state did so while you're going but I'm sure the Zoning Board will look at it that way. How many parking spaces you need 285, did you say?

MR. SQUIRES: That is from my calculation.

MR. LANDER: And providing 135?

MR. SQUIRES: 131.

MR. LANDER: So we've got 105 spaces we need a variance for?

MR. STENT: That is based on it all being manufacturing, isn't it, as opposed to warehousing?

MR. SQUIRES: Exactly and it's based on bulk tables which are, I think more or less based on a standard use of like production line sort of thing, which is why I wanted to give you an indication through the photographs, if you have time.

MR. EDSALL: Ed, that isn't based on all manufacturing. If you look on the upper right corner under general notes, he's broken it down to 10,000 square foot of office area, estimation of 50,000 in manufacturing, and then 109,000 in warehouse so the majority of the

buildings are being calculated based on the highest square footage per parking spaces, one space per thousand square foot which is warehousing, that is one of the things we suggested at the workshop since their indication is that they store a lot more than they manufacture at any one time so they are taking to their best extent advantage of the warehousing but it's apparently not enough based on their actual conditions of operation.

MR. DUBALDI: That is up to the Zoning Board, not us.

MR. EDSALL: That is what they are telling us, that is why they've got to go to the ZBA.

MR. LANDER: Just a question because if you need a variance for half the amount of parking, I mean or double the amount, then it's going to be a tough road to travel.

MR. PETRO: Conceptually, does anyone have a problem with the overall plan?

MR. LANDER: Just so we know where we're at 1B, on the, I guess the north side of this building, you're going to have to get approval on that end of that building there, I think it was machine shop maybe 1B and then I think even the other side, 1C, did you realize that?

MR. SQUIRES: There was a lot of discussion of 1C being a violation earlier, many years ago, yet the offset is proper, the height is proper. I just put it up and I don't know if that is a Zoning Board issue or really a Planning Board.

MR. LANDER: You have to come first to us then the Zoning because he needed it for the height variance, like you pointed out and he didn't even come, he just put it up, so we have operated out of the one end, the other end never got completed but eventually he stopped working out of that 50 by 75, all right. Rubb relocatable building, what's that?

MR. SQUIRES: That is the catalogue I gave you, it is a building that is a steel framework or aluminum

framework with a reinforced fabric skin open to give you very high clear span.

MR. LANDER: You call it relocatable?

MR. SQUIRES: That is what it is defined as, you put it on a flat slab foundation and it's easy to be moved.

MR. LANDER: So it does have footings, foundation?

MR. SQUIRES: Yes, it does.

MR. BABCOCK: This building is located in Cornwall and you're going to move it to here?

MR. SQUIRES: Yes. And of course the question comes up and need to look at it, that is available, too.

MR. LANDER: Now, building I guess we'd call it existing steel building in the rear of that property, what's going to happen with that building there?

MR. SQUIRES: Strictly warehouse and storage.

MR. LANDER: In other words, there was always a problem, they never moved in there, whether or not, Mike, can you shed any light on that? Do you have approval for that building?

MR. BABCOCK: Yes, they have approval for it, they have a building permit but as of right now, there's no C.O. on it.

MR. LANDER: Why is that?

MR. BABCOCK: It's never been completed.

MR. SQUIRES: I go back with this building because I was representing Boss Glass before they went bankrupt and this was initially built by Insulpane for a single line of glass products, it was to be one long piece of equipment and I think before it became operational, even to the point of bringing equipment in, they sold to Boss Glass and then of course Boss Glass subsequently went bankrupt so that has a lot to do with

the fact that it was left and sort of abandoned.

MR. LANDER: Structurally that building is sound.

MR. SQUIRES: Yes, there are some cracks in the walls which I need to address structurally and look at.

MR. PETRO: Conceptually, does anyone have a problem with the layout of this?

MR. LANDER: No.

MR. PETRO: Ron's hit on a lot of good points.

MR. LANDER: I make a motion that we approve the ECTS site plan.

MR. DUBALDI: Second it.

MR. PETRO: Motion has made and seconded that the New Windsor Planning Board grant final approval to the ECTS site plan on Temple Hill Road. Is there any further discussion from the board members? If not, roll call.

ROLL CALL

MR. STENT	NO
MR. LANDER	NO
MR. DUBALDI	NO
MR. PETRO	NO

MR. PETRO: Now, if you go to the Zoning Board and get the necessary variances that are needed and have them on the map, we'll be gladly have this at a future date and at that time, I would suggest that you go over some of these technical comments that Mark made and we'll set you up here and get you back in.

MR. SQUIRES: Can I extend two more minutes of time to get an impression from you folks as to what you would like to see regarding landscaping on the site?

MR. DUBALDI: As much as possible.

MR. SQUIRES: Good point. We intended to do the

screening along here, this is the main truck usage.

MR. DUBALDI: It's a mess right now.

MR. SQUIRES: One of the concerns I have, what we can do here, we can do a lot in front of the building but up along Temple Hill Road, it's a problem because the property line is down slope and everything up the slope and visible to everybody is part of state property.

MR. STENT: I think if that is maintained Temple Hill Road is sloping, you do the shrubs out front you have no problem if it's maintained.

MR. SQUIRES: It's maintained to a certain extent but it's not landscaped like the next door neighbor's are with grass.

MR. PETRO: Draw up a small landscaping plan to accompany the plan at the next meeting with maybe your idea of what you'd like to do. Mr. Dubaldi said it best, naturally we'd like to see as much as possible without encumbering the use of the property. So if you can come up with a small plan.

MR. DUBALDI: Dress it up, make it nice.

MR. SQUIRES: I know it's a headache.

MR. DUBALDI: It's an eyesore right now.

MR. LANDER: There's a hole at the very corner of the building, can you tell me has that been blocked off?

MR. SQUIRES: You see on the map there's a culvert and I believe that is a collapsed portion of the drainage culvert there that needs to be filled in. We're in a situation right now with the building department where we have an allowance to go in and do some demolition and I think one thing that we should be doing--

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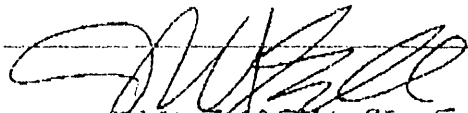
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OFFICE OF THE PLANNING BOARD - TOWN OF NEW WINDSOR
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ZONE

PIDESCRIPTION OF EXISTING SITE: SEC: 4 BLOCK: 3 LOT: 10.12

IS DISAPPROVED ON THE FOLLOWING GROUNDS:

FRONT YARD VARIANCESHEIGHT VARIANCEPARKING VARIANCE
MARK JEDSALL PE for
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<u>REQUIREMENTS</u>		<u>PROPOSED OR AVAILABLE</u>	<u>VARIANCE REQUEST</u>
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MIN. LOT AREA	<u>40 000</u>	<u>415,555</u>	<u>—</u>
MIN. LOT WIDTH	<u>150</u>	<u>631+</u>	<u>—</u>
REQ'D FRONT YD	<u>50</u>	WEMBLY WEST 42.95 TEMPLE HILL 45.89	WEMBLY 7.05 TEMPLE HILL 4.11 *
REQ'D SIDE YD.	<u>15/40</u>	<u>N/A</u>	<u>—</u>
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MR. SQUIRES: There was a lot of discussion of 1C being a violation earlier, many years ago, yet the offset is proper, the height is proper. I just put it up and I don't know if that is a Zoning Board issue or really a Planning Board.

MR. LANDER: You have to come first to us then the Zoning because he needed it for the height variance, like you pointed out and he didn't even come, he just put it up, so we have operated out of the one end, the other end never got completed but eventually he stopped working out of that 50 by 75, all right. Rubb relocatable building, what's that?

MR. SQUIRES: That is the catalogue I gave you, it is a building that is a steel framework or aluminum

framework with a reinforced fabric skin open to give you very high clear span.

MR. LANDER: You call it relocatable?

MR. SQUIRES: That is what it is defined as, you put it on a flat slab foundation and it's easy to be moved.

MR. LANDER: So it does have footings, foundation?

MR. SQUIRES: Yes, it does.

MR. BABCOCK: This building is located in Cornwall and you're going to move it to here?

MR. SQUIRES: Yes. And of course the question comes up and need to look at it, that is available, too.

MR. LANDER: Now, building I guess we'd call it existing steel building in the rear of that property, what's going to happen with that building there?

MR. SQUIRES: Strictly warehouse and storage.

MR. LANDER: In other words, there was always a problem, they never moved in there, whether or not, Mike, can you shed any light on that? Do you have approval for that building?

MR. BABCOCK: Yes, they have approval for it, they have a building permit but as of right now, there's no C.O. on it.

MR. LANDER: Why is that?

MR. BABCOCK: It's never been completed.

MR. SQUIRES: I go back with this building because I was representing Boss Glass before they went bankrupt and this was initially built by Insulpane for a single line of glass products, it was to be one long piece of equipment and I think before it became operational, even to the point of bringing equipment in, they sold to Boss Glass and then of course Boss Glass subsequently went bankrupt so that has a lot to do with

the fact that it was left and sort of abandoned.

MR. LANDER: Structurally that building is sound.

MR. SQUIRES: Yes, there are some cracks in the walls which I need to address structurally and look at.

MR. PETRO: Conceptually, does anyone have a problem with the layout of this?

MR. LANDER: No.

MR. PETRO: Ron's hit on a lot of good points.

MR. LANDER: I make a motion that we approve the ECTS site plan.

MR. DUBALDI: Second it.

MR. PETRO: Motion has made and seconded that the New Windsor Planning Board grant final approval to the ECTS site plan on Temple Hill Road. Is there any further discussion from the board members? If not, roll call.

ROLL CALL

MR. STENT	NO
MR. LANDER	NO
MR. DUBALDI	NO
MR. PETRO	NO

MR. PETRO: Now, if you go to the Zoning Board and get the necessary variances that are needed and have them on the map, we'll be gladly have this at a future date and at that time, I would suggest that you go over some of these technical comments that Mark made and we'll set you up here and get you back in.

MR. SQUIRES: Can I extend two more minutes of time to get an impression from you folks as to what you would like to see regarding landscaping on the site?

MR. DUBALDI: As much as possible.

MR. SQUIRES: Good point. We intended to do the

screening along here, this is the main truck usage.

MR. DUBALDI: It's a mess right now.

MR. SQUIRES: One of the concerns I have, what we can do here, we can do a lot in front of the building but up along Temple Hill Road, it's a problem because the property line is down slope and everything up the slope and visible to everybody is part of state property.

MR. STENT: I think if that is maintained Temple Hill Road is sloping, you do the shrubs out front you have no problem if it's maintained.

MR. SQUIRES: It's maintained to a certain extent but it's not landscaped like the next door neighbor's are with grass.

MR. PETRO: Draw up a small landscaping plan to accompany the plan at the next meeting with maybe your idea of what you'd like to do. Mr. Dubaldi said it best, naturally we'd like to see as much as possible without encumbering the use of the property. So if you can come up with a small plan.

MR. DUBALDI: Dress it up, make it nice.

MR. SQUIRES: I know it's a headache.

MR. DUBALDI: It's an eyesore right now.

MR. LANDER: There's a hole at the very corner of the building, can you tell me has that been blocked off?

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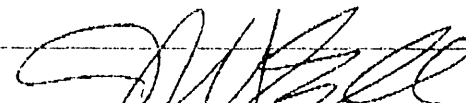
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MR. LANDER: Just so we know where we're at 1B, on the, I guess the north side of this building, you're going to have to get approval on that end of that building there, I think it was machine shop maybe 1B and then I think even the other side, 1C, did you realize that?

MR. SQUIRES: There was a lot of discussion of 1C being a violation earlier, many years ago, yet the offset is proper, the height is proper. I just put it up and I don't know if that is a Zoning Board issue or really a Planning Board.

MR. LANDER: You have to come first to us then the Zoning because he needed it for the height variance, like you pointed out and he didn't even come, he just put it up, so we have operated out of the one end, the other end never got completed but eventually he stopped working out of that 50 by 75, all right. Rubb relocatable building, what's that?

MR. SQUIRES: That is the catalogue I gave you, it is a building that is a steel framework or aluminum

framework with a reinforced fabric skin open to give you very high clear span.

MR. LANDER: You call it relocatable?

MR. SQUIRES: That is what it is defined as, you put it on a flat slab foundation and it's easy to be moved.

MR. LANDER: So it does have footings, foundation?

MR. SQUIRES: Yes, it does.

MR. BABCOCK: This building is located in Cornwall and you're going to move it to here?

MR. SQUIRES: Yes. And of course the question comes up and need to look at it, that is available, too.

MR. LANDER: Now, building I guess we'd call it existing steel building in the rear of that property, what's going to happen with that building there?

MR. SQUIRES: Strictly warehouse and storage.

MR. LANDER: In other words, there was always a problem, they never moved in there, whether or not, Mike, can you shed any light on that? Do you have approval for that building?

MR. BABCOCK: Yes, they have approval for it, they have a building permit but as of right now, there's no C.O. on it.

MR. LANDER: Why is that?

MR. BABCOCK: It's never been completed.

MR. SQUIRES: I go back with this building because I was representing Boss Glass before they went bankrupt and this was initially built by Insulpane for a single line of glass products, it was to be one long piece of equipment and I think before it became operational, even to the point of bringing equipment in, they sold to Boss Glass and then of course Boss Glass subsequently went bankrupt so that has a lot to do with

the fact that it was left and sort of abandoned.

MR. LANDER: Structurally that building is sound.

MR. SQUIRES: Yes, there are some cracks in the walls which I need to address structurally and look at.

MR. PETRO: Conceptually, does anyone have a problem with the layout of this?

MR. LANDER: No.

MR. PETRO: Ron's hit on a lot of good points.

MR. LANDER: I make a motion that we approve the ECTS site plan.

MR. DUBALDI: Second it.

MR. PETRO: Motion has made and seconded that the New Windsor Planning Board grant final approval to the ECTS site plan on Temple Hill Road. Is there any further discussion from the board members? If not, roll call.

ROLL CALL

MR. STENT	NO
MR. LANDER	NO
MR. DUBALDI	NO
MR. PETRO	NO

MR. PETRO: Now, if you go to the Zoning Board and get the necessary variances that are needed and have them on the map, we'll be gladly have this at a future date and at that time, I would suggest that you go over some of these technical comments that Mark made and we'll set you up here and get you back in.

MR. SQUIRES: Can I extend two more minutes of time to get an impression from you folks as to what you would like to see regarding landscaping on the site?

MR. DUBALDI: As much as possible.

MR. SQUIRES: Good point. We intended to do the

screening along here, this is the main truck usage.

MR. DUBALDI: It's a mess right now.

MR. SQUIRES: One of the concerns I have, what we can do here, we can do a lot in front of the building but up along Temple Hill Road, it's a problem because the property line is down slope and everything up the slope and visible to everybody is part of state property.

MR. STENT: I think if that is maintained Temple Hill Road is sloping, you do the shrubs out front you have no problem if it's maintained.

MR. SQUIRES: It's maintained to a certain extent but it's not landscaped like the next door neighbor's are with grass.

MR. PETRO: Draw up a small landscaping plan to accompany the plan at the next meeting with maybe your idea of what you'd like to do. Mr. Dubaldi said it best, naturally we'd like to see as much as possible without encumbering the use of the property. So if you can come up with a small plan.

MR. DUBALDI: Dress it up, make it nice.

MR. SQUIRES: I know it's a headache.

MR. DUBALDI: It's an eyesore right now.

MR. LANDER: There's a hole at the very corner of the building, can you tell me has that been blocked off?

MR. SQUIRES: You see on the map there's a culvert and I believe that is a collapsed portion of the drainage culvert there that needs to be filled in. We're in a situation right now with the building department where we have an allowance to go in and do some demolition and I think one thing that we should be doing--

MR. BABCOCK: There's a barricade around that now, I seen that today. They have a, I asked them if they can put a barricade until we can figure out what it is and if it needs to be repaired and put a barricade around

it.

MR. LANDER: That hole has only been there for a year.

MR. BABCOCK: There hasn't been an owner.

MR. LANDER: I came to Town Hall on another subject and I got pushed off from one to the other, one from the police department to the highway to this, to that to the other thing and it never got blocked off. Now I'm glad to see somebody blocking it off.

MR. BABCOCK: We asked them one time and they did it.

MR. PETRO: There was some gasoline tanks or some fuel tanks that were going to be removed. Can you make a note on the map that next time you're in here that they have been removed or are going to be removed.

MR. SQUIRES: Right.

MR. PETRO: Can you note it on the plan?

MR. SQUIRES: Definitely.

WILLIAM C. SQUIRES, P.E.

RECEIVED MAR 16 1995

Consulting Engineer

11 Ashwood Terrace Newburgh, New York 12550
(914) 561-3299 Fax (914) 565-1353

March 15, 1995

Planning Board
Town of New Windsor
555 Union Avenue - Town Hall
New Windsor, NY 12553

Re: ECTS Scenic Technologies
335 Temple Hill Road
WCS No. 95003

Dear Ladies and Gentlemen:

ECTS Scenic Technologies has recently purchased the former Boss Glass (Insulpane) facility on Temple Hill Road with the purpose of occupying and conducting business from that site. ECTS Scenic Technologies constructs stage sets for Broadway plays and their touring groups as well as sets for major trade shows.

The facility as it now exists does not have an approved site plan nor is it in compliance with the Zoning regulation of the Town of New Windsor. It is ECTS Scenic Technologies' intent to seek a variance to the Zoning regulation with regard to building location non-compliances.

The existing non-compliances are as follows:

- (a) Addition (Bldg 1B) on Wembly Road Ext is non-compliant with regard to offset distance and building height.
- (b) Addition (Bldg 1a) in front of main building facing Temple Hill Road is non-compliant with regard to offset distance.

In addition, a new fabric covered, relocatable building is being proposed for the site. This structure would be situated behind the main building between it and the 60' x 600' building at the rear of the property. This location is non-compliant with regard to its distance from adjacent buildings.

Parking calculations (shown on plan) indicate a requirement for 285 parking spaces. This greatly exceeds the maximum anticipated number of employees, which is 140. We propose to provide 131 parking spaces.

RECEIVED MAR 16 1995

Page two
WCS No. 95003
March 15, 1995
Town of New Windsor Planning Board

It is hoped that a cooperative effort will resolve the historic problem that this site has and allow ECTS Scenic Technologies to occupy the facility as a major employer and a good neighbor.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William C. Squires', followed by a horizontal line.

William C. Squires, P.E.
W. C. Squires Consulting Engineers

WCS/js



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

RECEIVED

SEP 17 1996

NEW WINDSOR PLANNING BOARD REVIEW FORM M.W. HIGHWAY DEPT.

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: 95 - 12
DATE PLAN RECEIVED: RECEIVED SEP 16 1996 Rev 3

The maps and plans for the Site Approval ☒
Subdivision _____ as submitted by
_____ for the building or subdivision of
_____ has been
reviewed by me and is approved ☒
disapproved _____.

If disapproved, please list reason _____

W. James Sullivan 9/18/96
HIGHWAY SUPERINTENDENT DATE

WATER SUPERINTENDENT DATE

SANITARY SUPERINTENDENT DATE

INTER-OFFICE CORRESPONDENCE

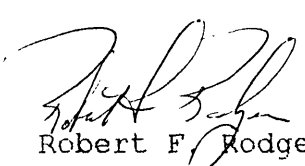
TO: Town Planning Board
FROM: Town Fire Inspector
DATE: 17 September 1996
SUBJECT: Scenic Properties; LLC

Planning Board Reference Number: PB-95-12
Dated: 16 September 1996
Fire Prevention Reference Number: FPS-96-044

A review of the above referenced subject site plan was conducted on 17 September 1996.

This site plan is acceptable.

Plans Dated: 13 September 1996 Revision 6



Robert F. Rodgers; C.C.A.

RFR/dh



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

95- 12

PLANNING BOARD FILE NUMBER: _____

DATE PLAN RECEIVED: RECEIVED SEP 16 1996 Rev 3

The maps and plans for the Site Approval _____

Subdivision _____ as submitted by

_____ for the building or subdivision of
Scenic Properties, LLC has been

reviewed by me and is approved ☒

~~disapproved~~ _____

~~If disapproved, please list reason~~ _____

This property is currently being fed by
the towns system - notify water dept. for any
changes in water services

HIGHWAY SUPERINTENDENT DATE

Steve DiDio 9-18-96
WATER SUPERINTENDENT DATE

SANITARY SUPERINTENDENT DATE



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: 95- 12

DATE PLAN RECEIVED: RECEIVED APR 3 1996 Rev 2

The maps and plans for the Site Approval ✓

Subdivision _____ as submitted by

_____ for the building or subdivision of

SCENIC PROPERTIES has been

reviewed by me and is approved ✓

disapproved _____.

If disapproved, please list reason _____

HIGHWAY SUPERINTENDENT _____ DATE _____

WATER SUPERINTENDENT _____ DATE _____

John E. Galt 4.12.96
SANITARY SUPERINTENDENT _____ DATE _____

INTER-OFFICE CORRESPONDENCE

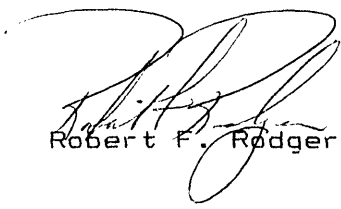
TO: Town Planning Board
FROM: Town Fire Inspector
DATE: 04 April 1996
SUBJECT: Scenic Properties, LLC.

Planning Board Reference Number: PB-95-12
Dated: 04 April 1996
FirePrevention Reference Number: FPS-96-023

A review of the above referenced subject site plan was conducted on 4 April 1996.

This site plan is acceptable.

Plans Dated: 3 April 1996 Revision 4



Robert F. Rodgers; C.C.A.

RFR/dh



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: 95- 12

DATE PLAN RECEIVED: RECEIVED APR 3 1996 Rev 2

The maps and plans for the Site Approval _____

Subdivision _____ as submitted by

_____ for the building or subdivision of
Scenic Properties _____ has been

reviewed by me and is approved ☒ _____,

disapproved _____.

~~If disapproved, please list reason~~ _____

- There is no problem with water lines -
Property is serviced with water.

HIGHWAY SUPERINTENDENT _____ DATE _____

WATER SUPERINTENDENT _____ DATE 4-8-96

SANITARY SUPERINTENDENT _____ DATE _____



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.

- ☐ Main Office
45 Quassaick Ave. (Route 9W)
New Windsor, New York 12553
(914) 562-8640
- ☐ Branch Office
400 Broad Street
Millford, Pennsylvania 18337
(717) 296-2765

PLANNING BOARD WORK SESSION
RECORD OF APPEARANCE

TOWN/VILLAGE OF New Windsor P/B # 91-12
WORK SESSION DATE: 17 JAN 96 APPLICANT RESUB.
REQUIRED: New Plans
REAPPEARANCE AT W/S REQUESTED: Not req'd
PROJECT NAME: ECTS
PROJECT STATUS: NEW _____ OLD X
REPRESENTATIVE PRESENT: Bill Squire
MUNIC REPS PRESENT: BLDG INSP. _____
FIRE INSP. X
ENGINEER X
PLANNER _____
P/B CHMN. _____
OTHER (Specify) _____

ITEMS TO BE ADDRESSED ON RESUBMITTAL:

- fix bulk tank - check 8'x8'x8' - add 8 signs 5-7'
- note to remove grading
- grading plan still NG - needs work
- get Air Products to re-schedule drainage
- quick check drainage plans - study must be reviewed
- Pipet Nick C/B's scheduled for Friday or Monday → install ASAP
- O/I Office re kubb bldg spacing
- lighting plan proposed B.S. need to be
- suggest 2 more street trees along w/length ext -

MIRA - Get me copy TSA Decisions!

4MJE91 pbwsform



he will be scheduling for 2/7 workshop

Licensed in New York, New Jersey and Pennsylvania

(he'll call)

INTER-OFFICE CORRESPONDENCE

TO: Town Planning Board

FROM: Town Fire Inspector

DATE: 31 July 1995

SUBJECT: Scenic Properties, Inc.

Planning Board Reference Number: PB-95-12

Dated: 21 July 1995

Fire Prevention Reference Number: FPS-95-041

A review of the above referenced subject site plan was conducted on 28 July 1995.

This site plan is approved.

Plans Dated: 15 July 1995 Revision 1

Robert F. Rodgers, C.C.A. (mvz)
Robert F. Rodgers, C.C.A.

RFR/mvz



TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM

1765

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: **RECEIVED 95-12**

DATE PLAN RECEIVED: **RECEIVED JUL 21 1995**

The maps and plans for the Site Approval _____

Subdivision _____ as submitted by _____

_____ for the building or subdivision of _____

335 Temple Hill Rd. Scenic Prop. _____ has been

reviewed by me and is approved ☒ _____

disapproved _____

~~If disapproved, please list reason~~ _____

Water is available in this area -
notify water dept. for location -

HIGHWAY SUPERINTENDENT _____ DATE _____

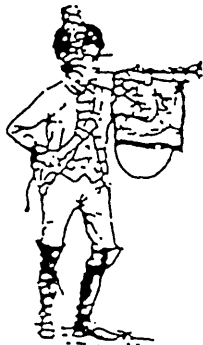
Steve D. D'Amico AMO-7-28-95
WATER SUPERINTENDENT _____ DATE _____

SANITARY SUPERINTENDENT _____ DATE _____

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM



1763

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: 95 - 12

DATE PLAN RECEIVED: RECEIVED MAR 16 1995

The maps and plans for the Site Approval _____
Subdivision _____ as submitted by
_____ for the building or subdivision of
_____ has been
reviewed by me and is approved ☒
disapproved ☐

If disapproved, please list reason _____

4-20-5-ayak 4/18/95
HIGHWAY SUPERINTENDENT DATE

WATER SUPERINTENDENT DATE

SANITARY SUPERINTENDENT DATE

INTER-OFFICE CORRESPONDENCE

TO: Town Planning Board

FROM: Town Fire Inspector

DATE: 16 March 1995

SUBJECT: ECTS Scenic Technologies

Planning Board Reference Number: PB-95-12

Dated: 16 March 1995

Fire Prevention Reference Number: FPS-95-019

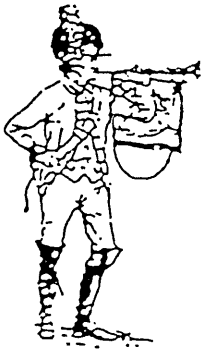
A review of the above referenced subject site plan was conducted on 16 March 1995.

This site plan is approved.

Plans Dated: 15 March 1995


Robert F. Rodgers, C.C.A.

RFR/mvz



1763

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

NEW WINDSOR PLANNING BOARD REVIEW FORM

TO: FIRE INSPECTOR, D.O.T., WATER, SEWER, HIGHWAY

PLEASE RETURN COMPLETED FORM TO:

MYRA MASON, SECRETARY FOR THE PLANNING BOARD

PLANNING BOARD FILE NUMBER: 95- 12

DATE PLAN RECEIVED: RECEIVED MAR 16 1995

The maps and plans for the Site Approval ECTS Scenic Tech.

Subdivision _____ as submitted by

Wm. C. Squiles PE for the building or subdivision of

_____ has been

reviewed by me and is approved ✓

disapproved _____

~~If disapproved, please list reason~~ _____

There is an existing 6" line and a
2" service line to this property.

HIGHWAY SUPERINTENDENT DATE

Steve D.D. CAMO 3-17-95
WATER SUPERINTENDENT DATE

SANITARY SUPERINTENDENT DATE

P.B. #95-12 Escrow

HARRIS PRODUCTION SERVICES, INC.

SHORE RD., BOX 335
CORNWALL-ON-HUDSON, NY 12520
(914) 534-6700

THE BANK OF NEW YORK
CORNWALL, NY 12518
50-235-219

29024

SEVEN HUNDRED FIFTY DOLLARS AND NO CENTS

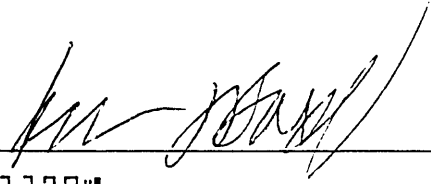
PAY
TO THE
ORDER
OF
TOWN OF NEW WINDSOR

DATE

3-14-95

AMOUNT

\$750.00



⑈029024⑈ ⑆021902352⑆ ⑈0223012279⑈

P.B. #95-12 Application fee

HARRIS PRODUCTION SERVICES, INC.

SHORE RD., BOX 335
CORNWALL-ON-HUDSON, NY 12520
(914) 534-6700

THE BANK OF NEW YORK
CORNWALL, NY 12518
50-235-219

29025

ONE HUNDRED DOLLARS AND NO CENTS

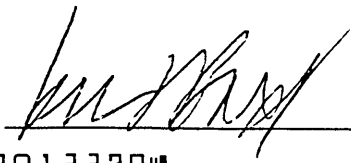
PAY
TO THE
ORDER
OF
TOWN OF NEW WINDSOR

DATE

3-14-95

AMOUNT

\$100.00



⑈029025⑈ ⑆021902352⑆ ⑈0223012279⑈



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E.
WILLIAM J. HAUSER, P.E.
MARK J. EDSALL, P.E.

- ☐ Main Office
45 Quassaick Ave. (Route 9W)
New Windsor, New York 12553
(914) 562-8640
- ☐ Branch Office
400 Broad Street
Millford, Pennsylvania 18337
(717) 296-2765

PLANNING BOARD WORK SESSION
RECORD OF APPEARANCE

1-3
TOWN/VILLAGE OF New Windsor P/B # 95 - 12
WORK SESSION DATE: 15 March 1995 APPLICANT RESUB.
REAPPEARANCE AT W/S REQUESTED: No REQUIRED: Full App
PROJECT NAME: ECTS S/P
PROJECT STATUS: NEW X OLD _____
REPRESENTATIVE PRESENT: Bill Squier; John Wolferts; Orestes Mihaly et al
MUNIC REPS PRESENT: BLDG INSP. Rich @ CM Dept Head
FIRE INSP. Rich
ENGINEER X
PLANNER _____
P/B CHMN. _____
OTHER (Specify) _____

ITEMS TO BE ADDRESSED ON RESUBMITTAL:

- PI A-15 - 2 exist bldg.; propose new bldg.
 - add bldg #'s; revise ht. info in bldg to reflect ^{more ht.} for each bldg.
 - Q - ck w/MS re 50' req't for building spacing.
 - need pkg variance & front yd variance & ht. variances
 - to provide brochure on Rubb Relocatable building -> Mike B & Rich
 - Sprinklers will probably need to be extended to Rubb
 - show existing light proposed dark.
 - drainage must be checked. - Mike ck Helmer plans for drainage
 - landscape lighting plans after ZBA, they don't want to do much w/ landscaping.
 - next avail agenda for ZBA referral
- 4MJE91 pbwsform

TOWN OF NEW WINDSOR

555 UNION AVENUE
NEW WINDSOR, NEW YORK 12553

"XX"

APPLICATION TO:
TOWN OF NEW WINDSOR PLANNING BOARD



17 TYPE OF APPLICATION (check appropriate item):

Subdivision _____ Lot Line Chg. _____ Site Plan X Spec. Permit _____

1. Name of Project ECTS - SCENIC TECHNOLOGIES
2. Name of Applicant ECTS - SCENIC TECHNOLOGIES Phone 534-3558
Address Box 335, Cornwall-on-Hudson, NY 12520
(Street No. & Name) (Post Office) (State) (zip)
3. Owner of Record SCENIC PROPERTIES LLC Phone 534-3558
Address Box 335, Cornwall-on-Hudson, NY 12520
(Street No. & Name) (Post Office) (State) (zip)
4. Person Preparing Plan WILLIAM C SQUIRES, P. E.
Address 11 ASHWOOD TERRACE, NEWBURGH, NY 12550
(Street No. & Name) (Post Office) (State) (zip)
5. Attorney N/A Phone _____
Address _____
(Street No. & Name) (Post Office) (State) (zip)
6. Person to be notified to represent applicant at Planning Board Meeting William C. Squires Phone (914) 561-3299
(Name)
7. Project Location: On the WEST side of TEMPLE HILL RD - Rt. 300
at the intersection (street)
West of Union Ave. (County Route 69)
(direction) (street)
8. Project Data: Acreage of Parcel 9.55 Zone P1,
School Dist. _____
9. Is this property within an Agricultural District containing a farm operation or within 500 feet of a farm operation located in an Agricultural District? Y _____ N X

If you answer "yes" to question 9, please complete the attached Agricultural Data Statement.

10. Tax Map Designation: Section 4 Block 3 Lot 10.12

11. General Description of Project: _____

SEE ATTACHED LETTER

12. Has the Zoning Board of Appeals granted any variances for this property? _____yes Xno.

13. Has a Special Permit previously been granted for this property? _____yes Xno.

ACKNOWLEDGEMENT:

If this acknowledgement is completed by anyone other than the property owner, a separate notarized statement from the owner must be submitted, authorizing this application.

STATE OF NEW YORK)

SS.: 118-58-6922

COUNTY OF ORANGE)

The undersigned Applicant, being duly sworn, deposes and states that the information, statements and representations contained in this application and supporting documents and drawings are true and accurate to the best of his/her knowledge and/or belief. The applicant further acknowledges responsibility to the Town for all fees and costs associated with the review of this application.

Sworn before me this

3 day of March 1995

William C. [Signature]
Applicant's Signature

[Signature]
Notary Public

ELIZABETH K. MACRI
Notary Public, State of New York
No. 01MA5017064
Qualified in Orange County
Commission Expires Aug. 30, 1995

TOWN USE ONLY:

RECEIVED MAR 16 1995

Date Application Received

95 - 12

Application Number

RECEIVED MAR 16 1995

"XX"

APPLICANT'S PROXY STATEMENT
(for professional representation)for submittal to the
TOWN OF NEW WINDSOR PLANNING BOARDJOHN WOLF, deposes and says that he
(Applicant)resides at 92 MURRAY AVE., GOSHEN, NY 10924
(Applicant's Address)in the County of ORANGEand State of NEW YORKand that he is the applicant for ~~the~~ theECTS SCENIC TECHNOLOGIES

(Project Name and Description)

which is the premises described in the foregoing application and
that he has authorized W. C. SQUIRES CONSULTING ENGINEER
(Professional Representative)

to make the foregoing application as described therein.

Date: March 3, 1995John Wolf
(Owner's Signature)Clark D. Allen
(Witness' Signature)THIS FORM CANNOT BE WITNESSED BY THE PERSON OR REPRESENTATIVE OF
THE COMPANY WHO IS BEING AUTHORIZED TO REPRESENT THE APPLICANT
AND/OR OWNER AT THE MEETINGS.

RECEIVED MAR 16 1995

If applicable "XX"

TOWN OF NEW WINDSOR PLANNING BOARD
SITE PLAN CHECKLIST

ITEM

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Site Plan Title | 29. <input type="checkbox"/> Curbing Locations |
| 2. <input checked="" type="checkbox"/> Applicant's Name(s) | 30. <input type="checkbox"/> Curbing Through Section |
| 3. <input checked="" type="checkbox"/> Applicant's Address(es) | 31. <input type="checkbox"/> Catch Basin Locations |
| 4. <input checked="" type="checkbox"/> Site Plan Preparer's Name | 32. <input type="checkbox"/> Catch Basin Through Section |
| 5. <input checked="" type="checkbox"/> Site Plan Preparer's Address | 33. <input checked="" type="checkbox"/> Storm Drainage |
| 6. <input checked="" type="checkbox"/> Drawing Date | 34. <input checked="" type="checkbox"/> Refuse Storage |
| 7. <input type="checkbox"/> Revision Dates | 35. <input type="checkbox"/> Other Outdoor Storage |
| 8. <input checked="" type="checkbox"/> Area Map Inset | 36. <input type="checkbox"/> Water Supply |
| 9. <input checked="" type="checkbox"/> Site Designation | 37. <input type="checkbox"/> Sanitary Disposal System |
| 10. <input checked="" type="checkbox"/> Properties Within 500' of Site | 38. <input checked="" type="checkbox"/> Fire Hydrants |
| 11. <input checked="" type="checkbox"/> Property Owners (Item #10) | 39. <input checked="" type="checkbox"/> Building Locations |
| 12. <input type="checkbox"/> Plot Plan | 40. <input checked="" type="checkbox"/> Building Setbacks |
| 13. <input checked="" type="checkbox"/> Scale (1" = 50' or lesser) | 41. <input checked="" type="checkbox"/> Front Building Elevations |
| 14. <input checked="" type="checkbox"/> Metes and Bounds | 42. <input type="checkbox"/> Divisions of Occupancy |
| 15. <input checked="" type="checkbox"/> Zoning Designation | 43. <input type="checkbox"/> Sign Details |
| 16. <input checked="" type="checkbox"/> North Arrow | 44. <input checked="" type="checkbox"/> Bulk Table Inset |
| 17. <input checked="" type="checkbox"/> Abutting Property Owners | 45. <input checked="" type="checkbox"/> Property Area (Nearest
100 sq. ft.) |
| 18. <input checked="" type="checkbox"/> Existing Building Locations | 46. <input checked="" type="checkbox"/> Building Coverage (sq. ft.) |
| 19. <input type="checkbox"/> Existing Paved Areas | 47. <input checked="" type="checkbox"/> Building Coverage (% of
Total Area) |
| 20. <input type="checkbox"/> Existing Vegetation | 48. <input checked="" type="checkbox"/> Pavement Coverage (sq. ft.) |
| 21. <input checked="" type="checkbox"/> Existing Access & Egress | 49. <input checked="" type="checkbox"/> Pavement Coverage (% of
Total Area) |
| <u>PROPOSED IMPROVEMENTS</u> | |
| 22. <input checked="" type="checkbox"/> Landscaping | 50. <input checked="" type="checkbox"/> Open Space (sq. ft.) |
| 23. <input type="checkbox"/> Exterior Lighting | 51. <input type="checkbox"/> Open Space (% of Total Area) |
| 24. <input type="checkbox"/> Screening | 52. <input checked="" type="checkbox"/> No. of Parking Spaces Prop. |
| 25. <input checked="" type="checkbox"/> Access & Egress | 53. <input checked="" type="checkbox"/> No. of Parking Spaces Req. |
| 26. <input checked="" type="checkbox"/> Parking Areas | |
| 27. <input checked="" type="checkbox"/> Loading Areas | |
| 28. <input checked="" type="checkbox"/> Paving Details
(Items 25-27) | |

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REFERRING TO QUESTION 9 ON THE APPLICATION FORM, "IS THIS PROPERTY WITHIN AN AGRICULTURAL DISTRICT CONTAINING A FARM OPERATION OR WITHIN 500 FEET OF A FARM OPERATION LOCATED IN AN AGRICULTURAL DISTRICT, PLEASE NOTE THE FOLLOWING:

54. N/A Referral to Orange County Planning Dept. required for all applicants filing AD Statement.
55. N/A A Disclosure Statement, in the form set below must be inscribed on all site plan maps prior to the affixing of a stamp of approval, whether or not the Planning Board specifically requires such a statement as a condition of approval.

"Prior to the sale, lease, purchase, or exchange of property on this site which is wholly or partially within or immediately adjacent to or within 500 feet of a farm operation, the purchaser or leasor shall be notified of such farm operation with a copy of the following notification.

It is the policy of this State and this community to conserve, protect and encourage the development and improvement of agricultural land for the production of food, and other products, and also for its natural and ecological value. This notice is to inform prospective residents that the property they are about to acquire lies partially or wholly within an agricultural district or within 500 feet of such a district and that farming activities occur within the district. Such farming activities may include, but not be limited to, activities that cause noise, dust and odors."

This list is provided as a guide only and is for the convenience of the applicant. the Town of Ne Windsor Planning Board may require additional notes or revisions prior to granting approval.

PREPARER'S ACKNOWLEDGEMENT:

The Site Plan has been prepared in accordance with the checklist and the Town of New Windsor Ordinances, to the best of my knowledge

By: William [Signature]

Licensed Professional

Date: 3.15.95

PROJECT I.D. NUMBER

95 - 12

RECEIVED MAR 16 1995

617.21

SEQR

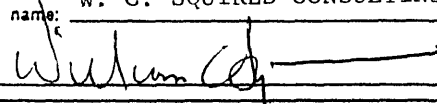
Appendix C

State Environmental Quality Review

SHORT ENVIRONMENTAL ASSESSMENT FORM

For UNLISTED ACTIONS Only

PART I—PROJECT INFORMATION (To be completed by Applicant or Project sponsor)

1. APPLICANT /SPONSOR W. C. SQUIRES CONSULTING ENGINEER	2. PROJECT NAME ECTS SCENIC TECHNOLOGIES
3. PROJECT LOCATION: Municipality NEW WINDSOR County ORANGE	
4. PRECISE LOCATION (Street address and road intersections, prominent landmarks, etc., or provide map) 335 Temple Hill Road, (NYS Route 300) at intersection with Union Ave. (Cty Road 69)	
5. IS PROPOSED ACTION: <input type="checkbox"/> New <input type="checkbox"/> Expansion <input checked="" type="checkbox"/> Modification/alteration	
6. DESCRIBE PROJECT BRIEFLY: MODIFY STRUCTURE AND SITE TO BE IN COMPLIANCE WITH ZONING AND PLANNING REGULATIONS.	
7. AMOUNT OF LAND AFFECTED: Initially 9.55 acres Ultimately 9.55 acres	
8. WILL PROPOSED ACTION COMPLY WITH EXISTING ZONING OR OTHER EXISTING LAND USE RESTRICTIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, describe briefly	
9. WHAT IS PRESENT LAND USE IN VICINITY OF PROJECT? <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Agriculture <input type="checkbox"/> Park/Forest/Open space <input type="checkbox"/> Other Describe:	
10. DOES ACTION INVOLVE A PERMIT APPROVAL OR FUNDING, NOW OR ULTIMATELY FROM ANY OTHER GOVERNMENTAL AGENCY (FEDERAL, STATE OR LOCAL)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, list agency(s) and permit/approvals	
11. DOES ANY ASPECT OF THE ACTION HAVE A CURRENTLY VALID PERMIT OR APPROVAL? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, list agency name and permit/approval	
12. AS A RESULT OF PROPOSED ACTION WILL EXISTING PERMIT/APPROVAL REQUIRE MODIFICATION? <input type="checkbox"/> Yes <input type="checkbox"/> No N/A	
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE TO THE BEST OF MY KNOWLEDGE	
Applicant/sponsor name: W. C. SQUIRES CONSULTING ENGINEER	Date: 3/15/95
Signature: 	

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment

OVER

PART II—ENVIRONMENTAL ASSESSMENT (To be completed by Agency)

A. DOES ACTION EXCEED ANY TYPE I THRESHOLD IN 8 NYCRR, PART 617.12? If yes, coordinate the review process and use the FULL EAF.	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
B. WILL ACTION RECEIVE COORDINATED REVIEW AS PROVIDED FOR UNLISTED ACTIONS IN 8 NYCRR, PART 617.8? If No, a negative declaration may be superseded by another involved agency.	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
C. COULD ACTION RESULT IN ANY ADVERSE EFFECTS ASSOCIATED WITH THE FOLLOWING: (Answers may be handwritten, if legible)	
C1. Existing air quality, surface or groundwater quality or quantity, noise levels, existing traffic patterns, solid waste production or disposal, potential for erosion, drainage or flooding problems? Explain briefly:	
YES INCREASE TRAFFIC ONTO TEMPLE HILL ROAD (ROUTE 300)	
C2. Aesthetic, agricultural, archaeological, historic, or other natural or cultural resources; or community or neighborhood character? Explain briefly:	
NO	
C3. Vegetation or fauna, fish, shellfish or wildlife species, significant habitats, or threatened or endangered species? Explain briefly:	
NO	
C4. A community's existing plans or goals as officially adopted, or a change in use or intensity of use of land or other natural resources? Explain briefly:	
NO	
C5. Growth, subsequent development, or related activities likely to be induced by the proposed action? Explain briefly:	
NO	
C6. Long term, short term, cumulative, or other effects not identified in C1-C5? Explain briefly:	
NO	
C7. Other impacts (including changes in use of either quantity or type of energy)? Explain briefly:	
NO	
D. IS THERE, OR IS THERE LIKELY TO BE, CONTROVERSY RELATED TO POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, explain briefly	

PART III—DETERMINATION OF SIGNIFICANCE (To be completed by Agency)

INSTRUCTIONS: For each adverse effect identified above, determine whether it is substantial, large, important or otherwise significant. Each effect should be assessed in connection with its (a) setting (i.e. urban or rural); (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude. If necessary, add attachments or reference supporting materials. Ensure that explanations contain sufficient detail to show that all relevant adverse impacts have been identified and adequately addressed.

<input type="checkbox"/> Check this box if you have identified one or more potentially large or significant adverse impacts which MAY occur. Then proceed directly to the FULL EAF and/or prepare a positive declaration.	
<input type="checkbox"/> Check this box if you have determined, based on the information and analysis above and any supporting documentation, that the proposed action WILL NOT result in any significant adverse environmental impacts AND provide on attachments as necessary, the reasons supporting this determination:	
_____ Name of Lead Agency	
_____ Print or Type Name of Responsible Officer in Lead Agency	_____ Title of Responsible Officer
_____ Signature of Responsible Officer in Lead Agency	_____ Signature of Preparer (if different from responsible officer)
_____ Date	

CERTIFICATE OF COMPLIANCE
for
FLOODPLAIN DEVELOPMENT

95-12

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<p><u>Town</u> <u>Orange</u> of <u>New Windsor</u> County, N.Y.</p> <p>(Applicant shall fill in all pertinent information in Section A including 1 or 2)</p>	
<p>SECTION A</p> <p>Premises location <u>335 Temple Hill</u> <u>New Windsor, NY</u></p> <p>Applicant Name & Address <u>Wm. Quiner</u> <u>11 Ashwood</u> <u>Newburgh, NY 12550</u></p> <p>Telephone No. <u>914-561-3299</u></p>	<p>Permit No. _____ Variance No. _____ Date _____</p> <p>CHECK ONE</p> <p>New Building _____ Existing Building <u>X</u> Other (List) _____</p>
<p>1. I certify that I have completed the above project in accordance with the Community's floodplain management regulations and have met all the requirements which were conditions of my permit. I now request completion of this Certificate of Compliance by the program administrator.</p> <p>PROPERTY NOT IN A FLOOD ZONE Signed <u>William Quiner</u> Date <u>3.15.95</u></p> <p>2. I certify that I have completed the above project in accordance with conditions of variance number _____, dated _____ to the Community's floodplain management regulations and have met all requirements which were a condition of the variance. I now request completion of this certificate of compliance by the program administrator.</p> <p>Signed _____ Date _____</p>	

SECTION B (Local Administrator will complete, file, and return a copy to the applicant.)

Final Inspection Date _____ by _____

This certifies that the above described floodplain development complies with requirements of Flood Damage Prevention Local Law No. _____, or has a duly granted variance.

Signed _____
(Local Administrator)

Date _____

Supporting Certifications: Floodproofing, elevation, hydraulic analysis, etc; (List).

RECEIVED MAR 16 1995

_____ of _____
_____ County, New York

Development in Flood Hazard Areas
Instructions

1. Type or print in ink
2. Submit _____ copies of all papers including detailed construction plans and specifications.
3. Furnish plans drawn to scale, showing nature, dimension and elevation of area in question; existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically the following is required: (A) NGVD (Mean Sea Level) elevation of lowest floor including basement of all structures; (B) description of alterations to any watercourse; (C) statement of techniques to be employed to meet requirements to anchor structures, use flood resistant materials and construction practices; (D) show new and replacement potable water supply and sewage systems will be constructed to minimize flood damage hazards; (E) Plans for subdivision proposal greater than 50 lots or 5 acres (whichever is least) must provide base flood elevations if they are not available; (F) Additional information as may be necessary for the floodplain administrator to evaluate application.
4. Where a non-residential structure is intended to be made watertight below the base flood level, a registered professional engineer or architect must develop and/or review structural design, specifications, and plans for the construction and certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of the local floodplain management regulations.

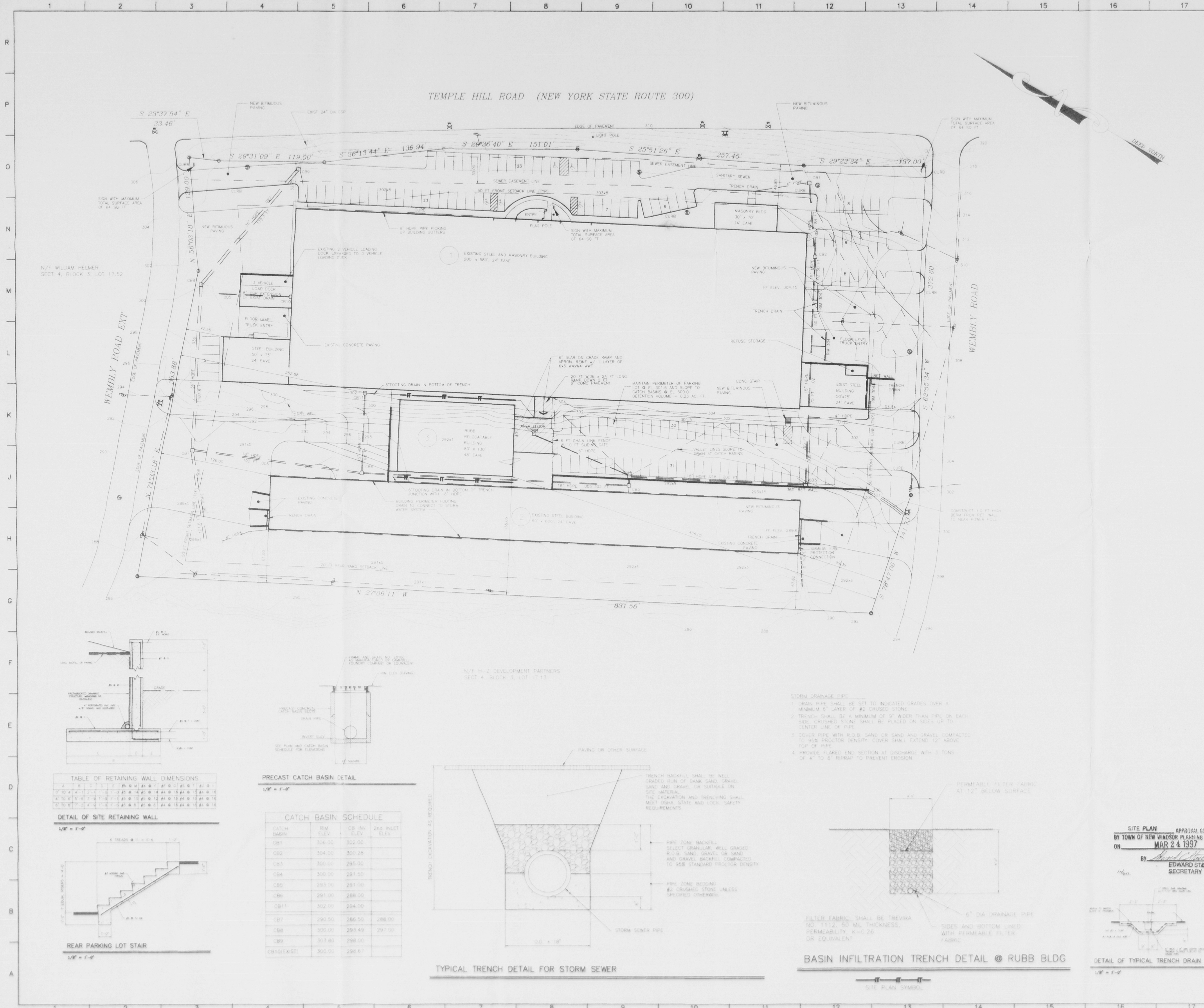
5. No work on the project shall be started until a permit has been issued by the floodplain administrator.
6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory compliance.
7. Applicant will provide all required elevation certifications and obtain a certificate of compliance prior to any use or occupancy of any structure or other development.

Applicant's signature

William D. [Signature]

Date

3.15.95



- ### GENERAL NOTES
1. SITE PLAN BASED ON SURVEY BY DANIEL P. YANOSH, LLS (NYS LIC NO 49561), DATED JANUARY 27, 1995.
 2. TAX MAP DESIGNATION: SECTION 3, BLOCK 4, LOT 10.12
 3. TOTAL AREA: 9.54 +/- ACRES.
 4. MAXIMUM ALLOWABLE BUILDING HEIGHTS BASED ON 6" PER FOOT OF DISTANCE TO LOT LINE
 5. CALCULATION OF REQUIRED PARKING SPACES:
A. ONE SPACE PER TWO EMPLOYEES AT MAXIMUM SHIFT - 140 EMPLOYEES / 2 = 70 REQUIRED
B. ONE SPACE PER 400 SF OF MANUFACTURING AND ASSOCIATED OFFICE SPACE AND ONE SPACE PER 1,000 SF OF WAREHOUSE AREA:
50,000 SF MFR AREA/400 = 125
10,000 SF OFFICE/200 = 50
108,200 SF WHSE/1,000 = 108
C. TO BE PROVIDED = 149

- ### SYMBOL LEDGEND
- | | | | |
|----------|------------------|----------|---------------------|
| [Symbol] | CATCH BASIN | [Symbol] | UTILITY POLE |
| [Symbol] | FIRE HYDRANT | [Symbol] | INFILTRATION TRENCH |
| [Symbol] | HANDICAP PARKING | [Symbol] | GAS VALVE |
| [Symbol] | WATER VALVE | [Symbol] | SEWER MANHOLE |
| [Symbol] | MONITORING WELL | [Symbol] | CULVERT PIPE |
| [Symbol] | RETAINING WALL | | |

USE/BULK REGULATION COMPARISON TABLE

ZONING-PLANNED INDUSTRIAL (PI) BASED ON LINE 15

	REQ/ALLOW	EXIST/PROP
1. LOT AREA	40,000	415,555
2. LOT WIDTH	150	631.56
3. FRONT YARD		
BLDG 1 (TEMPLE HILL)	50	46.89
BLDG 2 (WEMBY NORTH)	50	42.95
BLDG 3 (WEMBY SOUTH)	50	54.54
BLDG 4 (WEMBY NORTH)	50	126.00
BLDG 5 (WEMBY SOUTH)	50	99.39
BLDG 6 (WEMBY NORTH)	50	252.88
BLDG 7 (WEMBY SOUTH)	50	434.02
4. SIDE YARD/TOTAL	15/40	NONE
5. REAR YARD	20	61.00
6. FRONTAGE	N/A	N/A
7. MAX BLDG HEIGHT		
BLDG 1: 6" FT x 42.94 =	21.47	24.0
BLDG 2: 6" FT x 61.00 =	30.5	48.0
BLDG 3: 6" FT x 135.06 =	67.5	169.200
8. FLOOR AREA RATIO	0.60	0.41
9. FLOOR AREA	282	149
10. PARKING SPACES	5	5
11. HANDICAP PARKING	5	5
12. OFF STREET LOADING	5	5

NOTES

1. ALLOWABLE FRONT YARD VARIANCE OF 3.11 FT GRANTED AUG 14, 1995
2. ALLOWABLE FRONT YARD VARIANCE OF 7.05 FT GRANTED AUG 14, 1995
3. MAXIMUM BUILDING HEIGHT VARIANCE OF 2.53 FT GRANTED AUG 14, 1995
4. A VARIANCE OF 134 PARKING SPACES GRANTED AUG 14, 1995

	date
6. ADD SIAMEN CONN. ADD DET POND @ WEST LOT	9/13/98
7. REV BULK TABLE ADD DIMS	6/1/96
8. REV BLDG 3 SIZE	4/3/96
9. REV TOPO AND DRAINAGE & FRONT ENTRY	2/7/96
10. REVISIONS/SUBMISSIONS	date

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer
11 Ashwood Terrace
New Windsor, NY 12550
(914) 561-3799
Fax (914) 565-1555

4770 Lakes Office
Geneva, NY 14456
(518) 565-9549

SITE PLAN for SCENIC PROPERTIES, LLC NEW WINDSOR FACILITY

335 TEMPLE HILL ROAD
NEW WINDSOR, NEW YORK

Designed by: [Signature]
Checked by: [Signature]
Scale: 1" = 40'
Date: 9/13/98

Project no. 95003
Revision no. 6
Drawing no. C1

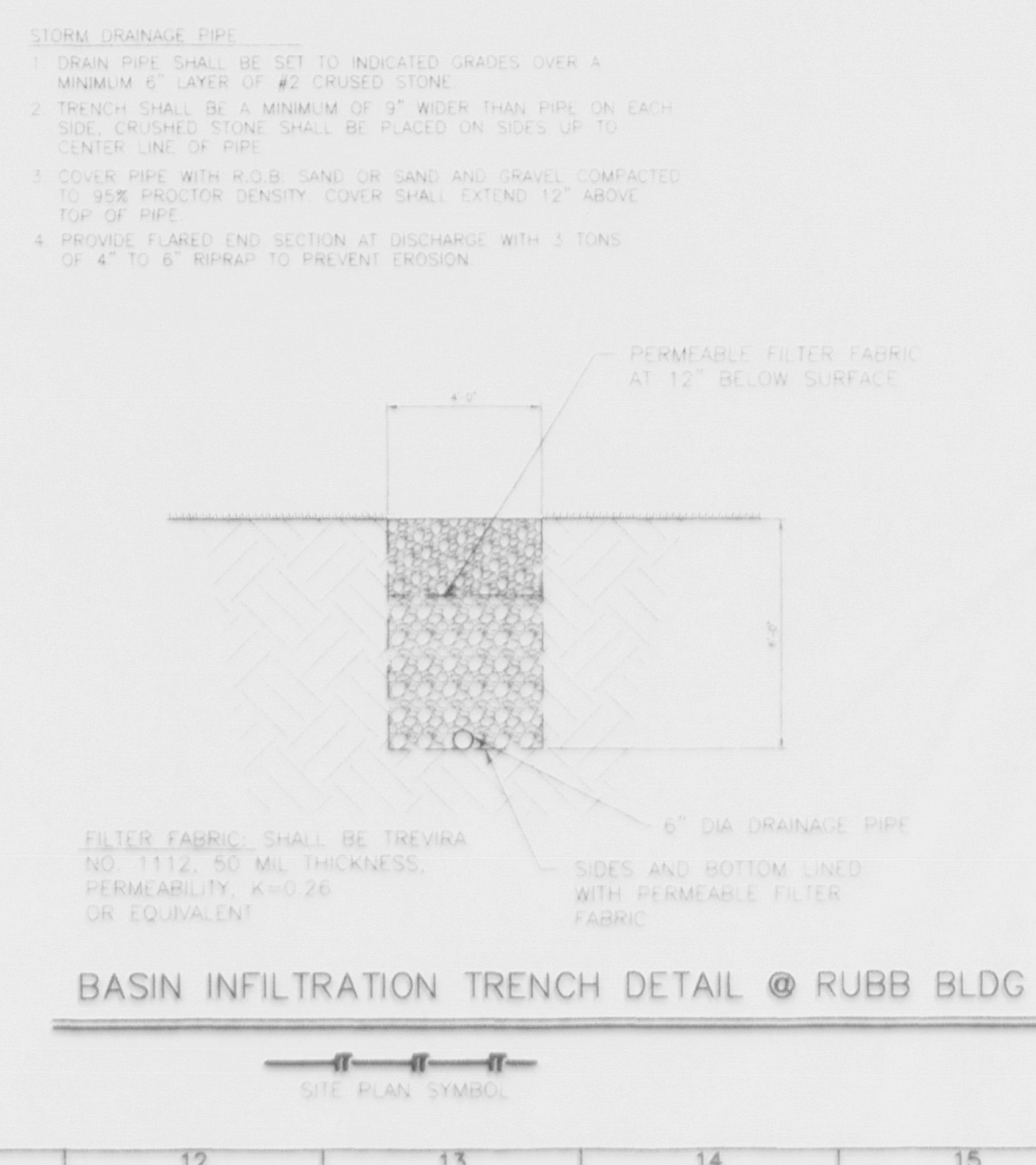
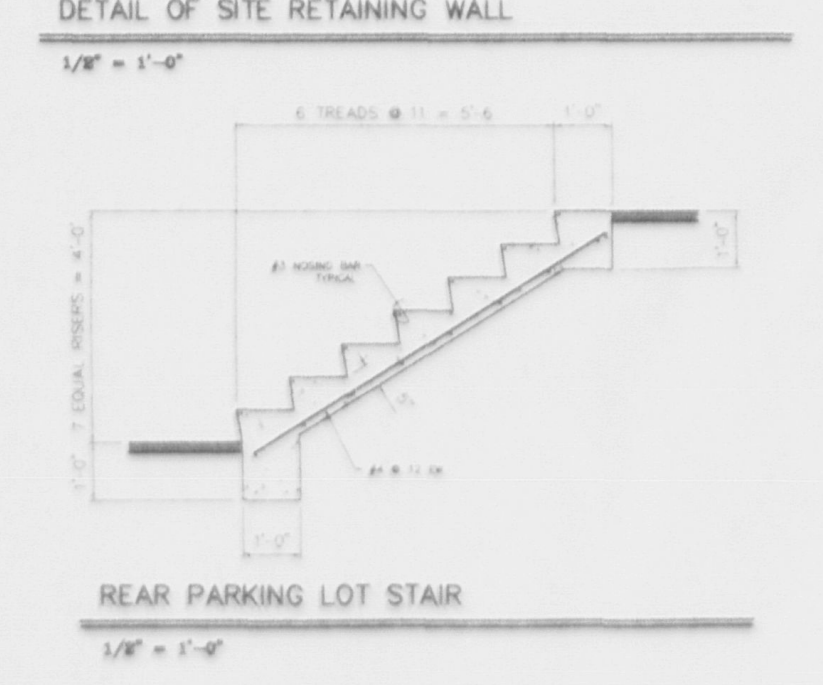


TABLE OF RETAINING WALL DIMENSIONS

WALL NO.	WALL TYPE	WALL HEIGHT	WALL WIDTH	WALL LENGTH
1	1	4'	4'	10'
2	2	4'	4'	10'
3	3	4'	4'	10'
4	4	4'	4'	10'
5	5	4'	4'	10'
6	6	4'	4'	10'
7	7	4'	4'	10'
8	8	4'	4'	10'
9	9	4'	4'	10'
10	10	4'	4'	10'
11	11	4'	4'	10'
12	12	4'	4'	10'
13	13	4'	4'	10'
14	14	4'	4'	10'
15	15	4'	4'	10'
16	16	4'	4'	10'
17	17	4'	4'	10'
18	18	4'	4'	10'
19	19	4'	4'	10'
20	20	4'	4'	10'



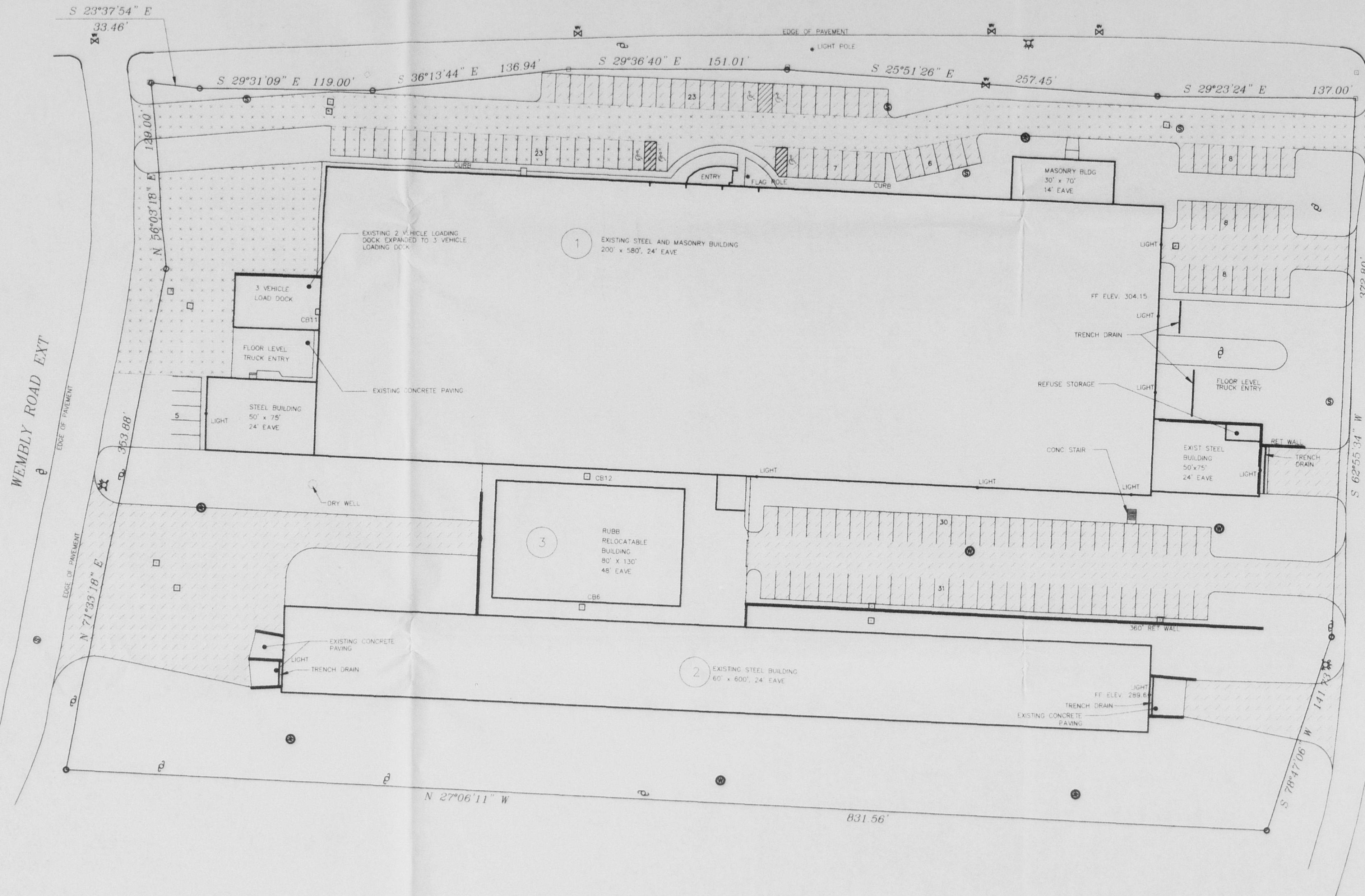
PRECAST CATCH BASIN DETAIL

1" = 4"

CATCH BASIN SCHEDULE

CATCH BASIN	RIM ELEV.	CB IN ELEV.	2nd INLET ELEV.
CB1	306.00	302.00	
CB2	304.00	300.28	
CB3	300.00	295.90	
CB4	300.00	291.50	
CB5	293.00	291.00	
CB6	291.00	288.00	
CB11	302.00	294.00	
CB7	290.50	286.50	288.00
CB8	300.00	293.49	297.00
CB9	303.80	298.00	
CB10(EXIST)	300.00	298.67	

TEMPLE HILL ROAD (NEW YORK STATE ROUTE 300)



ASPHALT CONCRETE PAVING NOTES

1. REMOVE LOOSE AND FOREIGN MATERIAL FROM SUB-BASE SURFACE BEFORE PAVING. USE POWER BROOMS, BLOWERS OR HAND BROOMING.
2. APPLY PRIME COAT AND ALLOW TO PENETRATE AND SEAL ALLOW TO CURE AND DRY FOR 24 HOURS MINIMUM.
3. APPLY PRIME COAT WHENEVER SUB-BASE SURFACE IS EXPOSED TO WEATHER FOR MORE THAN EIGHT WEEKS. IF VEHICULAR TRAFFIC IS ALLOWED ON SURFACE FOR MORE THAN ONE WEEK OR AS DIRECTED IN WRITING BY OWNERS REPRESENTATIVE.
4. TACK COAT TO BE DILUTED WITH WATER AND APPLIED TO CONTACT SURFACES OF EXISTING PAVING.
5. COAT SURFACES OF CURBS, GUTTERS, MANHOLES, CATCH BASINS, CONCRETE PAVEMENT AND ANY OTHER PROJECTING AND/OR ABUTTING STRUCTURES ALLOW TO DRY TO A TACKY CONSISTENCY BEFORE PAVING.
6. TACK COAT ALL END TRANSITIONS TO EXISTING PAVING.
7. PLACE ASPHALT CONCRETE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE OFF USING A SELF PROPELLED PAVING MACHINE. PAVING MACHINE SHALL HAVE A VIBRATING SCREEN. SPREAD ASPHALT CONCRETE WITH MATERIAL TEMPERATURE BETWEEN 225 AND 325 DEGREES. INACCESSIBLE AND SMALL AREAS MAY BE PLACED BY HAND.
8. MAKE JOINTS BETWEEN OLD AND NEW PAVING AND BETWEEN SUCCESSIVE DAYS PAVING.
9. JOINTS ARE TO HAVE SAME TEXTURE, DENSITY AND SMOOTHNESS AS ADJACENT SECTIONS.
10. AFTER COMPLETION OF PAVING, CLEAN SURFACES OF EXCESS OR SPILLED ASPHALT, GRAVEL, ETC. TO THE SATISFACTION OF OWNERS REPRESENTATIVE.

PAVEMENT STRIPING NOTES

1. STRIPE PAVEMENT AS INDICATED ON PLANS.
2. TRAFFIC LANE MARKING PAINT SHALL BE METHYLENE CHLORIDE AND TOLUENE CHLORIDE BASE, FACTORY MIXED, QUICK DRYING AND NON-BLEEDING, FS TTP-115F, TYPE 1.
3. COLOR: DRIVE LANE DIVIDERS - WHITE
NO PARKING ZONE MARKINGS - YELLOW
PARKING DIVIDERS - WHITE
WALKING LANES - ANS BLUE
HANDICAP ACCESSIBLE ISLES - ANS BLUE
SURFACE SYMBOLS - ANS BLUE

- PAVING TYPE 1 - PAVING IN THIS AREA PER DETAIL 1, THIS SHEET
- PAVING TYPE 2 - PAVING IN THIS AREA PER DETAIL 2, THIS SHEET
- PAVING TYPE 3 - PAVING PREDOMINANTLY AS PER DETAIL 3 WITH SOME TYPE 2 PAVING

SITE PLAN APPROVAL GRANTED
BY TOWN OF NEW WINDSOR PLANNING BOARD
ON MAR 24 1997

BY *Edward Stent*
EDWARD STENT,
SECRETARY

1	ADD CURB, REV HANDICAP PARKING DETAILS	4/3/96
no.	revisions/submissions	date

WILLIAM C. SQUIRES, P.E.
Structural & Civil Engineer

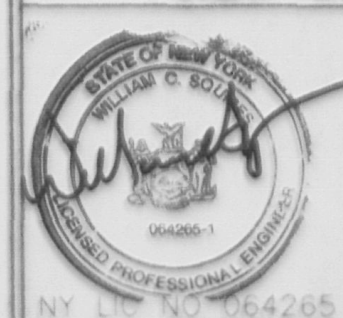
11 Ashwood Terrace
Newburgh, NY 12550
(914) 561-5200
Fax (914) 565-1553

Upper Lakes Office
4779 East Lake Road
Croydon, NY 14456
(914) 585-9549

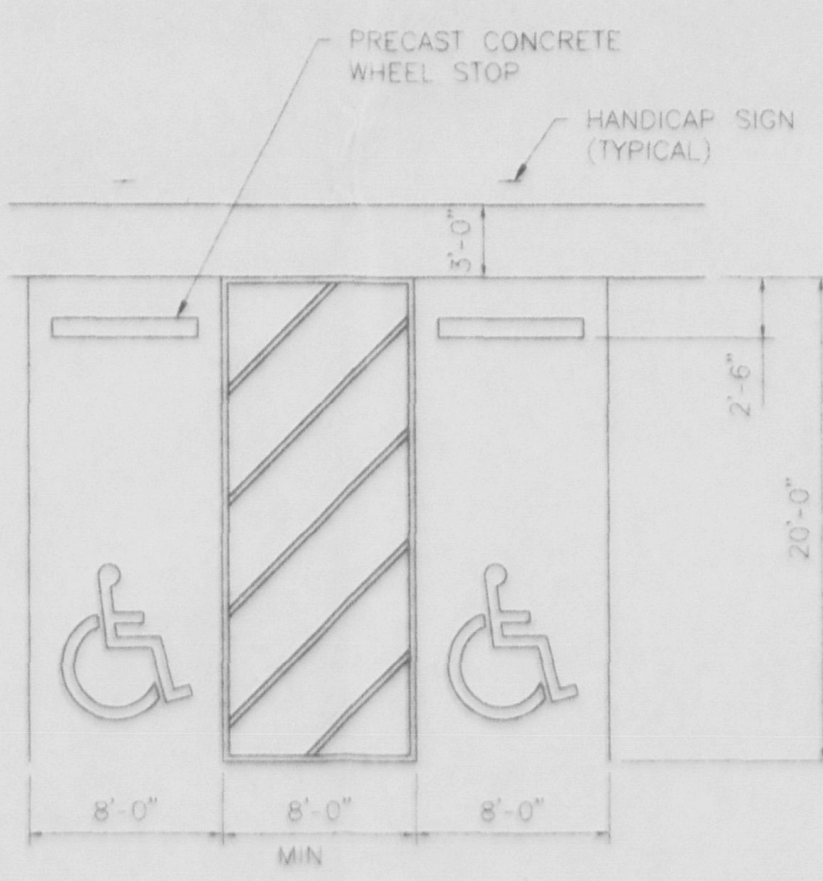
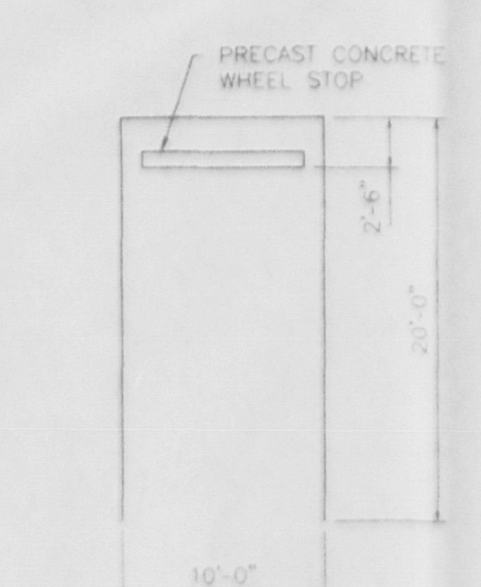
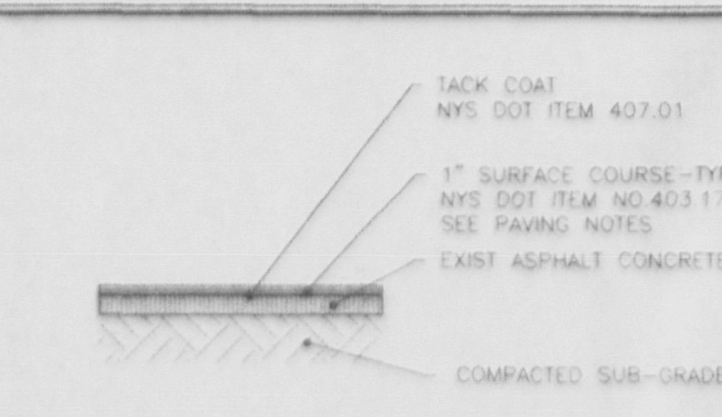
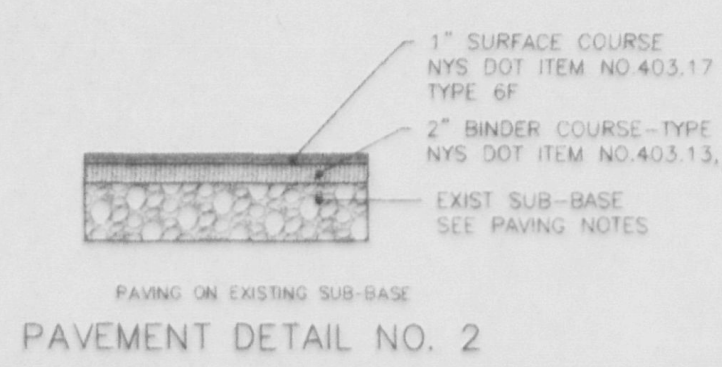
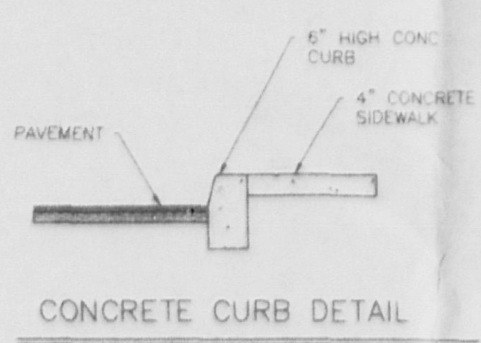
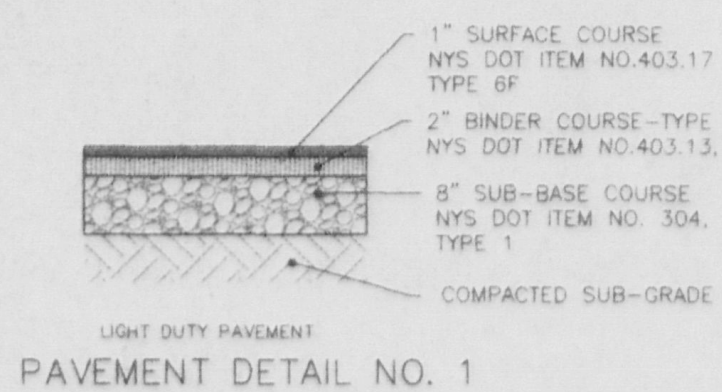
PAVING PLAN
for

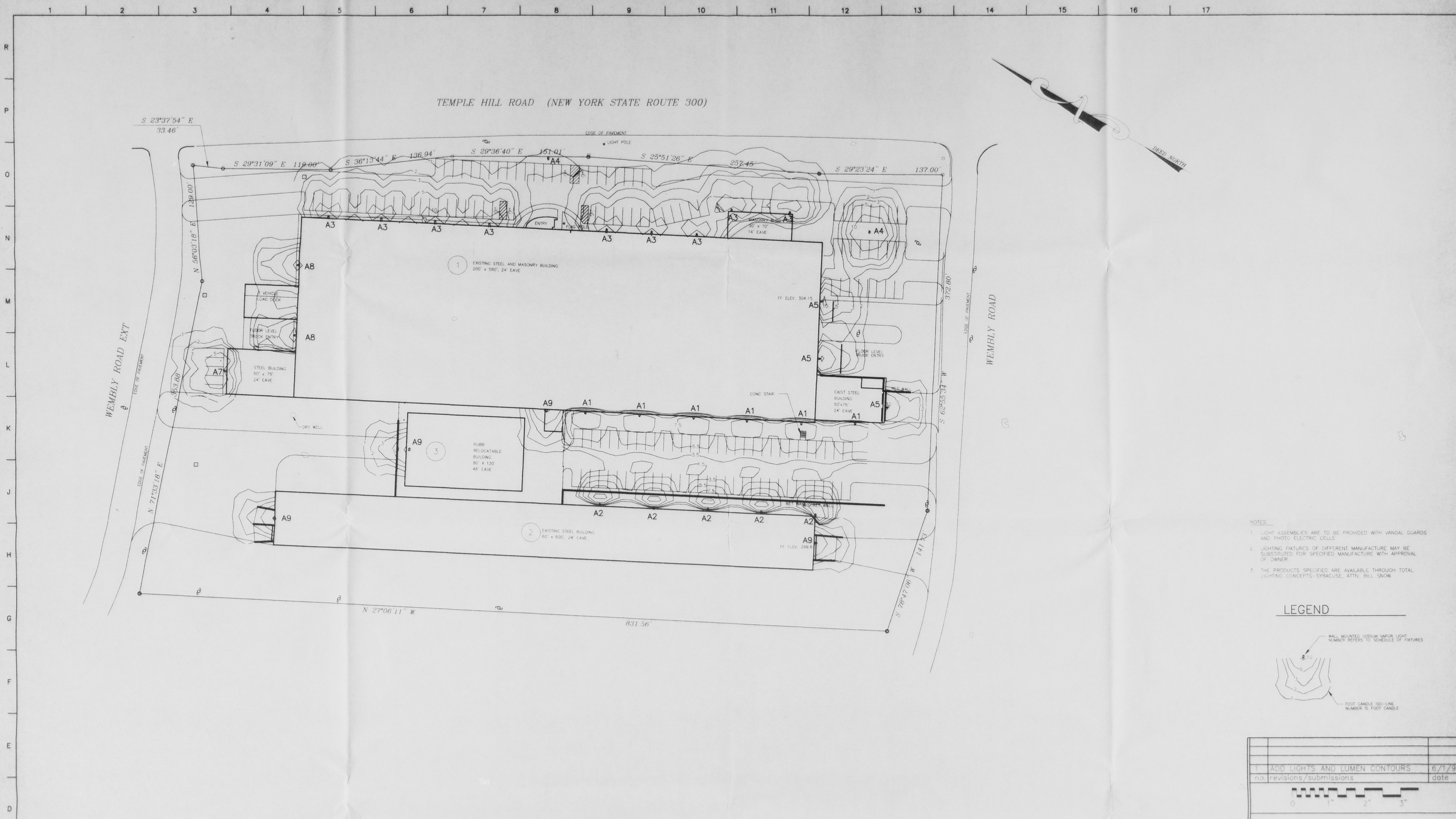
SCENIC PROPERTIES, LLC
NEW WINDSOR FACILITY

335 TEMPLE HILL ROAD
NEW WINDSOR, NEW YORK

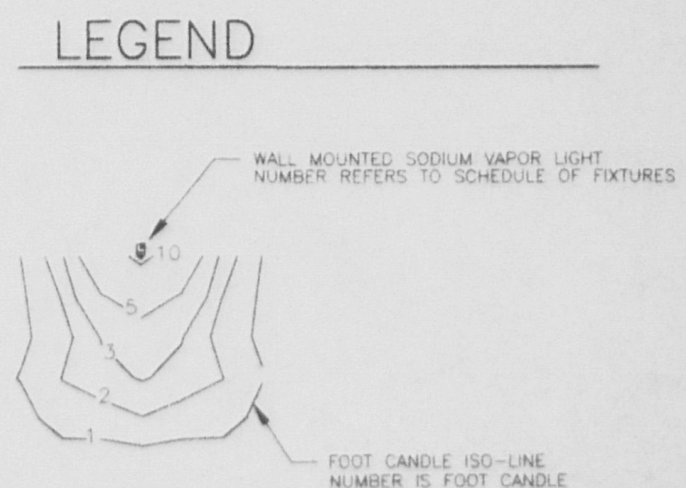


Designed by	WCS	Project no.	95003
Drawn by	WCS	revision no.	1
Checked by	WCS	drawing no.	C2
Scale	1"=40'		
Date	9/13/96		





- NOTES
1. LIGHT ASSEMBLIES ARE TO BE PROVIDED WITH VANDAL GUARDS AND PHOTO ELECTRIC CELLS.
 2. LIGHTING FIXTURES OF DIFFERENT MANUFACTURE MAY BE SUBSTITUTED FOR SPECIFIED MANUFACTURE WITH APPROVAL OF OWNER.
 3. THE PRODUCTS SPECIFIED ARE AVAILABLE THROUGH TOTAL LIGHTING CONCEPTS-SYRACUSE, ATTN: BILL SNOW.

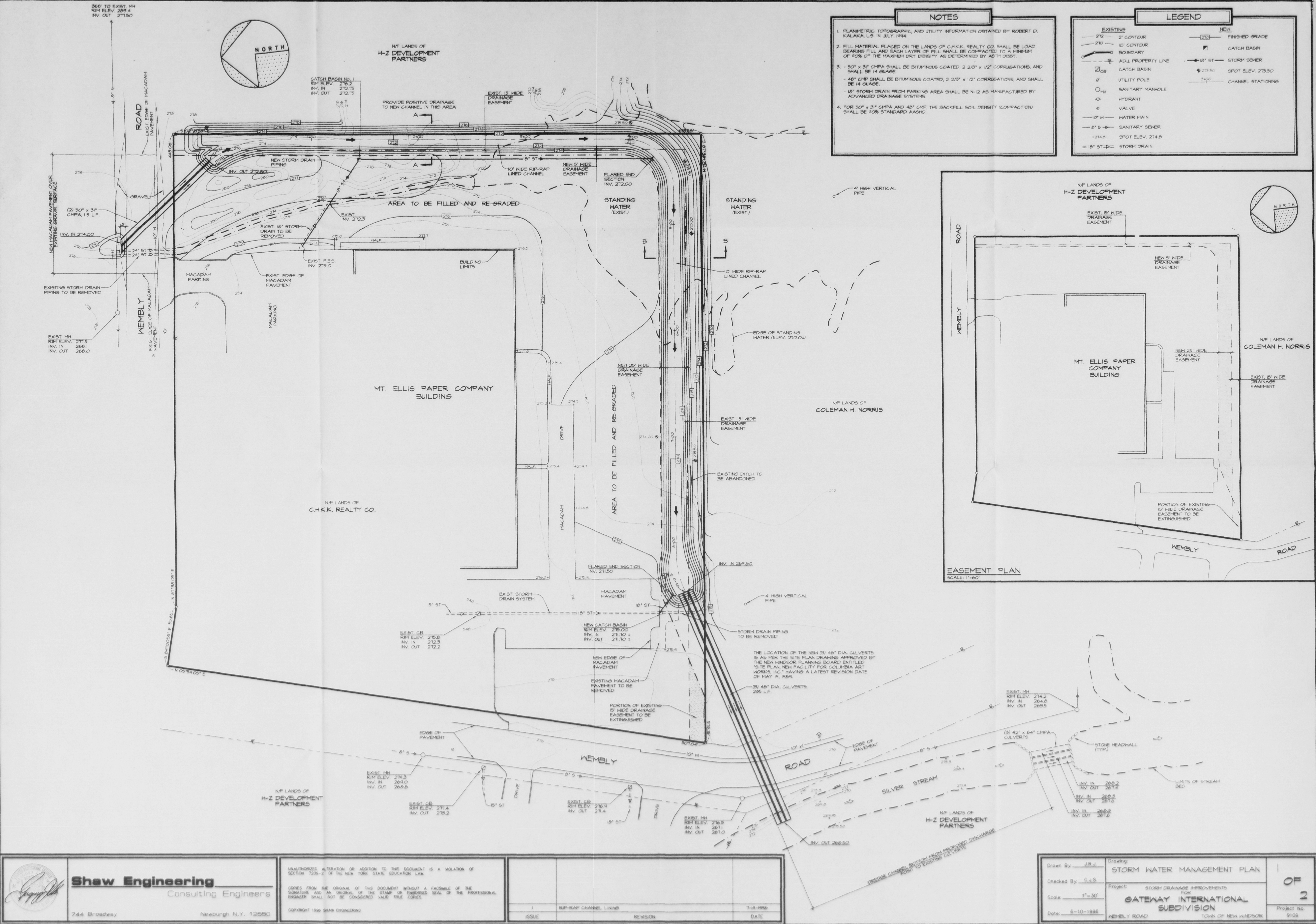


LIGHT ASSEMBLY SCHEDULE

MARK	TYPE	LAMP	MOUNTING	QTY
A1	SPAULDING VLI-S400	LU-250/S	WALL MOUNT	6
A2	SPAULDING VLI-S400	MVR400/I/U	WALL MOUNT	5
A3	SPAULDING VLI-S400	LU-400	WALL MOUNT	9
A4	GE LIGHTING P17M15S	LU-150	12 FT POLE, CONC BASE	1
A5	SPAULDING AM-S250-IV	LU-250	WALL MOUNT	3
A6	(2)SPAULDING VLI-S400	LU-400	12 FT POLE, CONC BASE	1
A7	SPAULDING VLI-S400	LU-400	WALL MOUNT	1
A8	SPAULDING AM-S250-IV	LU-250	WALL MOUNT	2
A9	SPAULDING AM-S250-IV	LU-250	WALL MOUNT	4

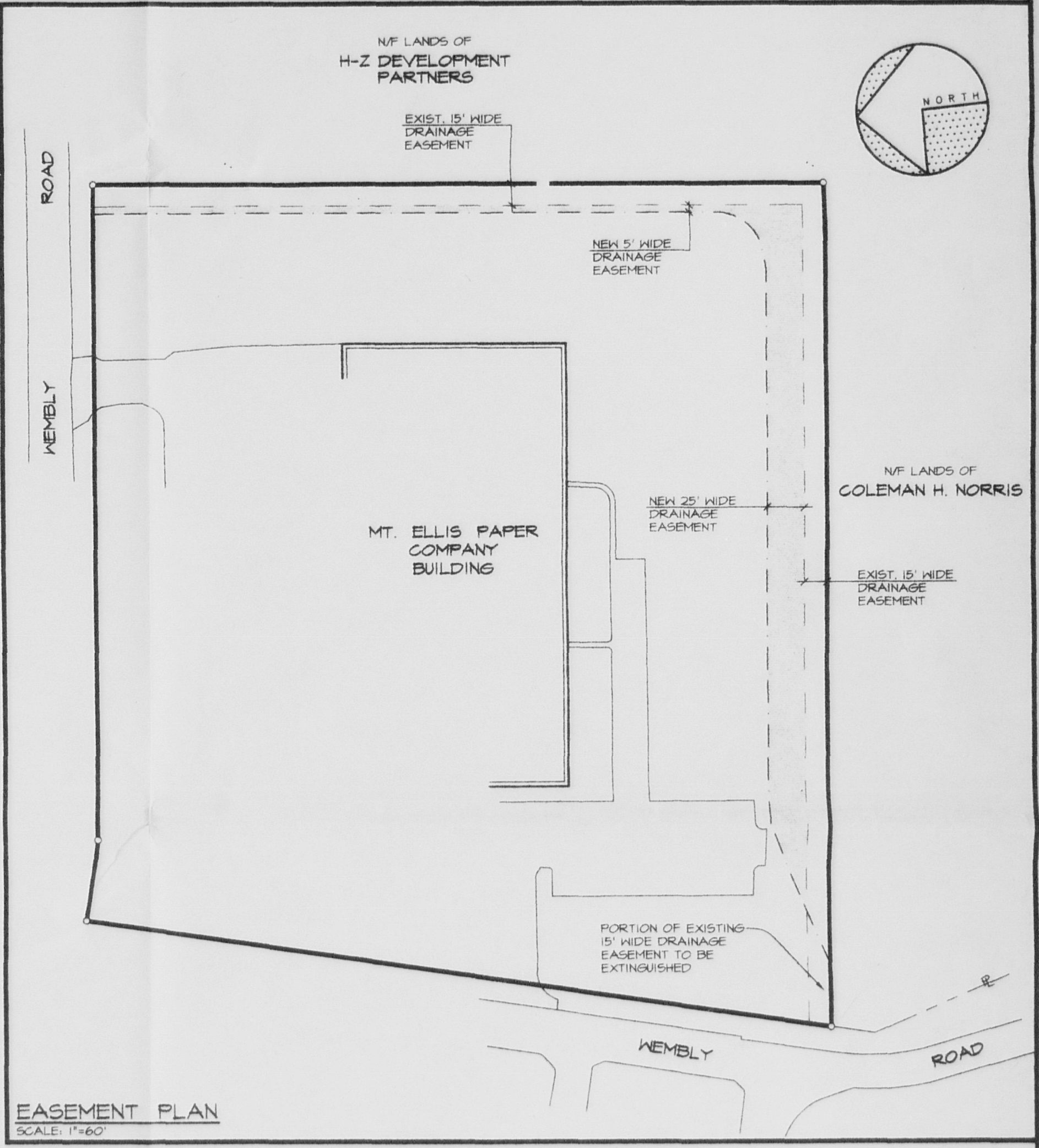
SITE PLAN APPROVAL GRANTED
BY TOWN OF NEW WINDSOR PLANNING BOARD
ON MAR 24 1997
BY EDWARD STEIN, SECRETARY

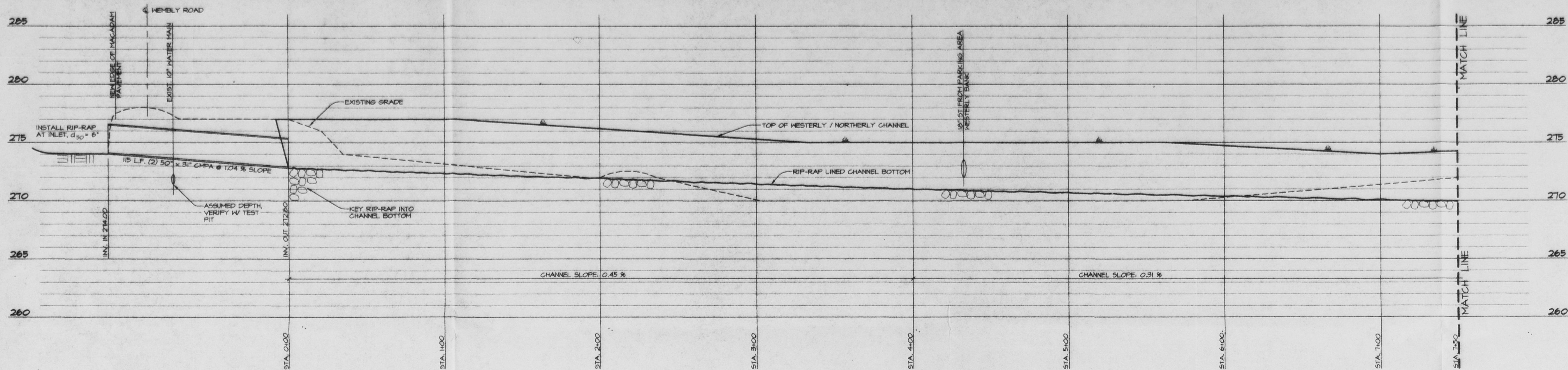
1. ADD LIGHTS AND LUMEN CONTOURS		6/1/96
no. revisions/submissions		date
<p>WILLIAM C. SQUIRES, P.E. Structural & Civil Engineer</p> <p>11 Ashwood Terrace New Windsor, NY 12550 (914) 561-2799 Fax (914) 565-1553</p> <p>4778 East Lake Road Geneva, NY 14456 (518) 565-9549</p>		
<p>SITE LIGHTING PLAN for SCENIC PROPERTIES, LLC NEW WINDSOR FACILITY 335 TEMPLE HILL ROAD NEW WINDSOR, NEW YORK</p>		
designed by	project no.	95003
drawn by	revision no.	1
checked by	drawing no.	C3
scale	1"=40'	
date	9/13/96	
NY LIC NO 064265		



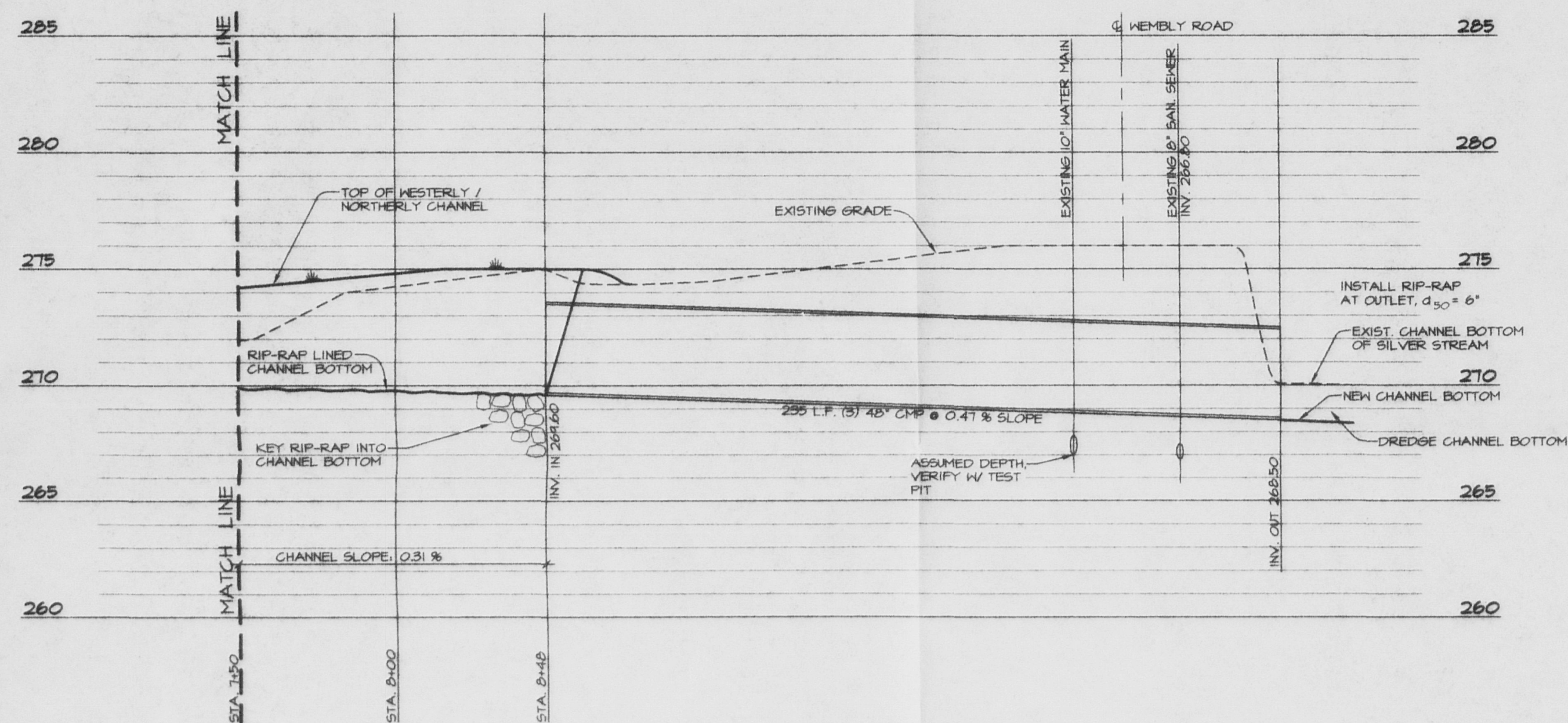
- NOTES**
1. PLANIMETRIC, TOPOGRAPHIC, AND UTILITY INFORMATION OBTAINED BY ROBERT D. KALARA, L.S. IN JULY, 1994.
 2. FILL MATERIAL PLACED ON THE LANDS OF CHKK, REALTY CO. SHALL BE LOAD BEARING FILL AND EACH LAYER OF FILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.
 3. - 50" x 31" CMPA SHALL BE BITUMINOUS COATED, 2 2/3" x 1/2" CORRUGATIONS, AND SHALL BE 14 GAUGE.
- 48" CMP SHALL BE BITUMINOUS COATED, 2 2/3" x 1/2" CORRUGATIONS, AND SHALL BE 14 GAUGE.
- 18" STORM DRAIN FROM PARKING AREA SHALL BE N-12 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS.
 4. FOR 50" x 31" CMPA AND 48" CMP, THE BACKFILL SOIL DENSITY (COMPACTION) SHALL BE 90% STANDARD AASHO.

LEGEND	
EXISTING	NEW
272 2' CONTOUR	275 FINISHED GRADE
270 10' CONTOUR	CATCH BASIN
BOUNDARY	18" ST- STORM SEWER
ADJ. PROPERTY LINE	275.50 SPOT ELEV. 275.50
CATCH BASIN	5+00 CHANNEL STATIONING
UTILITY POLE	
5 SANITARY MANHOLE	
HYDRANT	
8 VALVE	
10" W WATER MAIN	
8" S SANITARY SEWER	
274.5 SPOT ELEV. 274.5	
18" ST- STORM DRAIN	

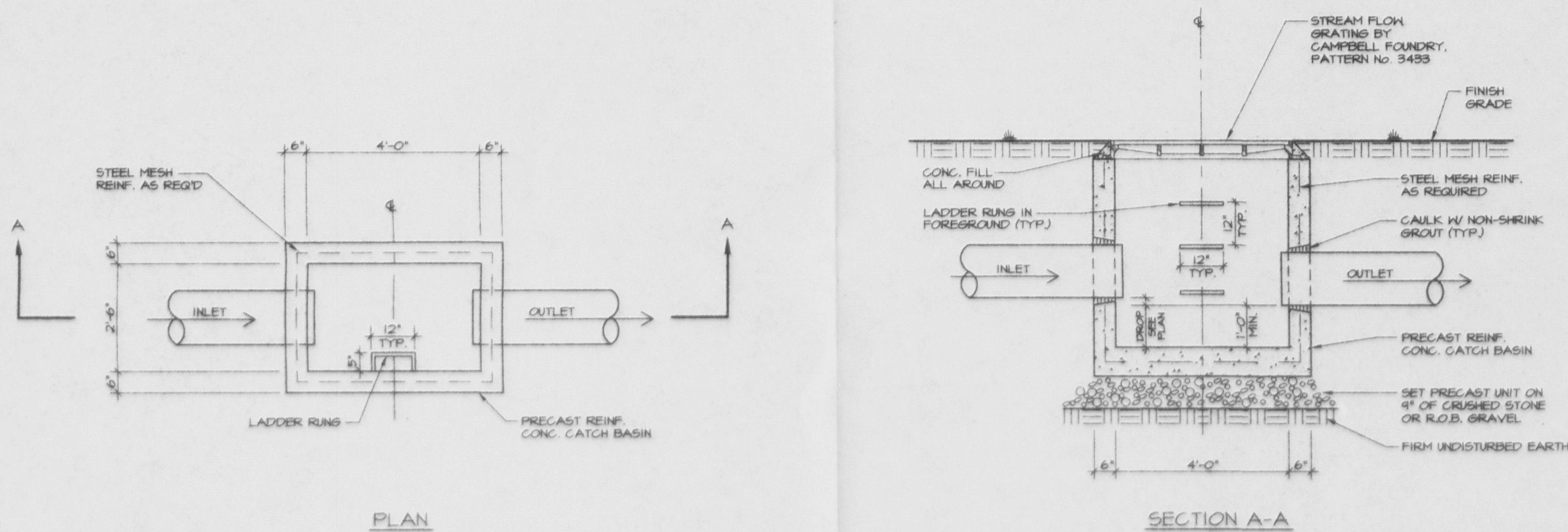
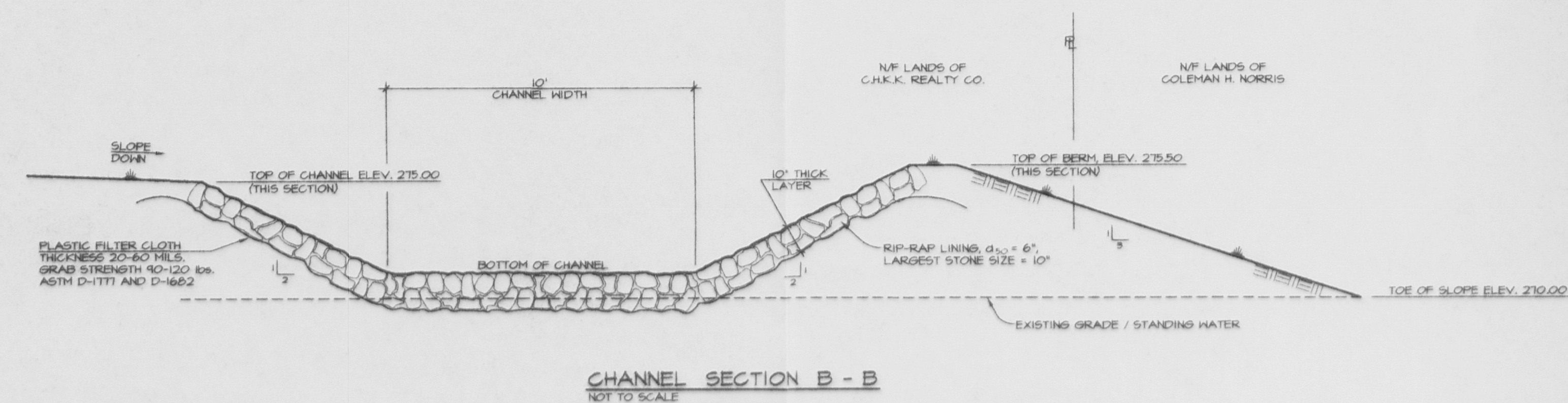
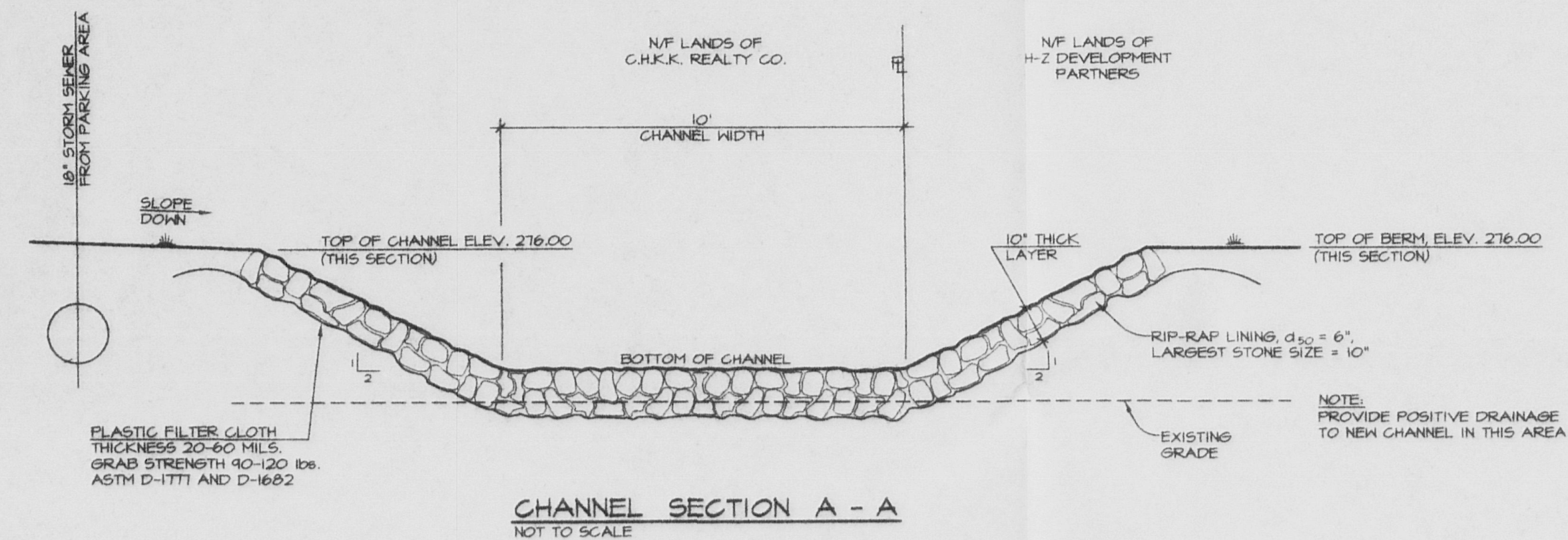




PROFILE
SCALE: VERT. 1"=4'
HORIZ. 1"=30'



PROFILE
SCALE: VERT. 1"=4'
HORIZ. 1"=30'



CATCH BASIN DETAIL
NOT TO SCALE